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Agricultural.

ARE FARM STATISTICS A BENEFIT TO FARMERS?

HOMER, March 1, 1888.
To the Editor of the Michigan Farmer.

Now Mr. Editor, I would like to ask one question; that is this: Do you not think that this prying into one's own private affairs in the shape of farm statistics is too much one-sided? By the present way of gathering statistics, a farmer's wheat crop is figured out to a small fraction of what the harvest will be; then statistics are gathered to show what the actual cost is to raise a bushel of wheat. I take wheat for the reason that it is the crop the poor farmer depends upon to raise money to pay the interest on the heavy mortgages, which statistics tell us the Michigan farmers are blessed with. Now if this prying into one's own private business is to be kept up, give us more of it. Give us statistics showing the actual cost to manufacture agricultural implements which are used on the farm. For instance, a self-binding harrow which the mortgagee farmer is asked to pay for \$140 to \$160 dollars for. Also mowing machines, hay tedders, plows, and various other tools. Methods which if one of these manufacturers should be questioned in regard to the actual cost of manufacturing the various articles, his reply would be something like this: "There is the door, you get it; that is none of your business."

Wishing the publishers of the MICHIGAN FARMER success, and hoping for more statistics, I am
Respectfully yours,
A. W. P.

OPPOSED TO DEHORNING.

THINKS THE "FARMER" SHOULD NOT ALLOW CORRESPONDENTS TO GIVE THEIR EXPERIENCE WITH IT.

GRAND LEDGE, March 15, 1888.
To the Editor of the Michigan Farmer.

Having just finished reading Mr. Colvin's article in your last issue, and being so indignant at it and at you for allowing it to come before the readers of the MICHIGAN FARMER, I cannot hold my peace any longer. If there is an association for the protection of dumb animals, I think it is time for them to make an appearance and prevent any more innocent cows from being drawn up to a post, and held by the nose by a kind hearted man, while another man—no doubt he was a Christian—takes a crosscut saw and removes her horns, for no other reason than to see her suffer. I have lived on a farm for 30 years and my father for 50 years before me; and we have never had a horse, cow, sheep, or hog injured by the horn of any animal; and if men do have such accidents happen on their farms, it is more their fault than the horns of the cows; and if they were punished for their carelessness with the same severity as they wish to punish these poor animals, I think they would be more humane. Now, if dehorning cattle has become fashionable, and all the men must follow the fashion, why don't some one tell how to perform the operation in a respectable manner. Tell us how to chloroform the animal so there will be less suffering. If there are any more to raise a hand for the helpless please raise it. Remember that by being quiet you are not doing your duty.
A READER.

THE Menden Globe mentions the sale of a flock of clipped lambs there, 83 in number, half blood Hampshire, raised by J. H. Taft, which averaged 113½ lbs. They were sired by a thoroughbred Hampshire ram.

THE Fenton Union Agricultural Society will hold their next annual fair on the 2nd, 3rd, 4th and 5th of October, at Fenton, Genesee County.

HEREFORDS AT AUCTION.

On April 4th, at the fair grounds of the Northwestern Agricultural Society in the city of Flint, a public sale of Herefords will be held. At this sale there will be offered from the Crapo herd 31 head in all, comprising 25 females and six bulls. The females include some imported animals, and both old and young trace to the most noted families of this breed. The bulls in use in this herd are Sir Horace 11199 (8051), bred by John Price, Pembroke, England; Sir Burton 14549, bred by Adams Earl, Lafayette, Ind.; Gallant 16948, bred by M. H. Cochrane, Quebec, Canada; Bonnie Lad 4th 10877, bred by F. W. Stone, Guelph, Ont.; Count 8067, and Alert 8046. All the younger animals are sired by these bulls, and the females either have calves, or are in calf to Gallant 16948, Sir Burton 14549, or Sir Horace 11199. These sires are rich in the blood of the noted Horace 2492, the sire of such bulls as Chancellor, Grove 3d, Grand Duke, Horatius, and other noted animals; also have a great deal of the blood of Lord Wilton, Sir Bartle Frere, Old Court, Grove 3d, etc. The females include some animals which have not only produced prize winners, but are prize winners themselves. The sale will be conducted by Mr. John W. Foster as manager for Mr. Crapo, and he announces emphatically that every animal catalogued if bid on will be sold, that there will be no by-bidding, that every animal to be offered is recorded, and a certificate to that effect will be given every purchaser; all females guaranteed breeders, and all bulls getters. Certainly under such conditions purchasers can bid with confidence in every animal being just as represented. There is plenty of room in Michigan for every animal which will be offered, and if they and thousands like them would be put in place of an equal number of scrubs, it would be a grand thing for the State in every way.

NAPOLEON FARMERS' CLUB.

The March meeting of the Napoleon Farmers' Club was held at the residence of Mrs. Ida Blair. Although the weather was rainy and threatening the attendance was good and the meeting interesting.

The first topic for discussion was "The Silo and Ensilage," which was well treated in a paper read by Mr. Chas. Corvill, who said:

This question at present is occupying the interest of nearly all farmers' clubs, and it comes in close connection with the siloing of grain. The numerous experimental stations that are trying and reporting favorably upon this mode of curing fodder certainly are encouraging us as to its practicality to the average farmer. And they tell us, too, that a great saving, financially, may be made by constructing our silos of wood instead of masonry, as it was first said they must be made. Corn is used more for ensilage than anything else, as it affords a greater burden per acre; but the time for cutting is not fully agreed upon by all. Dr. Collier, of the Geneva, N. Y., Experiment Station, has made over one hundred analyses of corn in the different stages of development, and says: "The nearer ripe the ear the better the result."

The cost of one acre of corn fit to harvest is not more than \$12, and it will yield 20 tons of ensilage, which with a cost of 55 cents per ton for gathering, makes a total of \$23 for the 20 tons of fodder. One cow will consume about 50 pounds per day, hence the 20 tons will nearly keep two cows for one year at a cost of \$11.50 each, which will hardly winter one cow on dry feed.

Butter made from ensilage fed cows is equal in quality to any made in June. To fill the silo nearly all agree that it should be put in one day at a time and let heat to a temperature of 135 degrees, then put in another day's filling.

Mr. Cady said the silo was looked upon about as the steam thrasher was at first, when many would not have one on the farm, but now will have nothing else. So if we keep up with the progress in agriculture we must adopt the green curing of our fodder, if it is satisfactorily demonstrated that it is a matter of economy.

Mr. Halliday said the expense of a silo need be so little, and no great trouble, as it may be put in the end of a mow or bay. And, again, much is saved, as it does away with husking the corn, shelling, taking to mill, and either giving or paying toll. Corn put into a silo costs only about 16 to 30 per cent, while cured dry shrinks over 50 per cent.

Mr. Elliott said he had put clover hay in to the bottom of a mow when only fairly wilted, and putting other hay on top had it come out in excellent condition and much heavier in bulk.

Mr. Harrington said that he thought any man putting hay into a mow had indirectly had experience with the silo, as he understood ensilage was the fodder preserved with the juice dried in instead of allowed to evaporate into the open air.

Other members discussed this question freely, when the limit of time closed it.

Miss Nora Dean read an essay on the subject of floriculture.

Mrs. A. Wood opened a discussion on bread-making by reading a short paper, which will be found in the HOUSEHOLD hereafter, with the discussion it brought out.

The April meeting of the club is to be at the residence of Mr. A. H. Reed, when the topics, "Which is the most profitable horse for the average farmer?" and "How far should the wife be conversant with the details of the farm?" will be discussed.

M. L. DEAN, Sec'y.

M. L. Sweet, of Grand Rapids, has been elected president of the North American Holstein-Friesian Association, which met at Buffalo last week.



The Albion Spring Tooth Cultivator.

LEVEL CULTIVATION.

The great advantage of level culture for corn has long been advocated by the most eminent agriculturists. Corn roots in most of running down as many thoughtlessly suppose, spread out near the surface, and if filled up throw out a second set of roots from the joint nearest the surface. This process exhausts the plant unnecessarily, using the plant food which should go to develop stalks, leaves and ears. Again, level culture secures in the greatest degree possible exemption from the effect of drought. Leaving the ground in furrows exposes double the surface to the absorbing influence of the hot dry air, while keeping the surface as level as possible, yet loose, enables it to not only retain the moisture in it, but to condense that which is present in the air which penetrates the porous soil.

There is another serious fault with the ordinary system of cultivation. The corn roots spread out over the ground forming a perfect network. With the ordinary cultivator these are all torn to pieces every time it is cultivated, and in a dry season so saps its very life, that it cannot absorb sufficient plant food to form the ear, and the result is a failure of the crop.

Now unquestionably the ground should be thoroughly pulverized down deep, so it will hold the moisture, but this should be done while the corn is small, before the ground becomes a network of corn roots. What is wanted is a tool that will work the ground deep on the start, and the surface later on, and the lack of this has been the real reason why level culture has not been more generally adopted. Its advantage has been universally conceded, but the tools which have been built for this purpose would only work the surface when "the soil was in the right condition, but were useless in a rainy season when the weeds got the start and the ground hard, and could not be used at all when it was stony or rooty, and the old cultivator or corn plow had to be kept for this work, making the cost of the surface cultivator only an additional outlay and consequently but few farmers have used them. To combine in one machine the good features of the corn plow or shovel cultivator with a practical tool for level cultivation was the aim of Mr. Gale, the well known inventor. In bringing out the Albion Spring Tooth Cultivator, and the rapidity with which its trade has been built up, is ample evidence that it is a complete success.

Hung on a regular cultivator frame it has five spring teeth on a side, about the width of an ordinary cultivator narrow shovel, or "bull tongue," which can be run at any depth, thoroughly pulverizing the ground to the bottom of the furrow if desired. The ordinary corn plow has only two shovels, so it either breaks the ground up in lumps, or leaves a strip between the shovels that is not stirred at all, but the Albion cuts all the ground down deep the first cultivation and after the corn roots have spread over the ground it can be run shallow, just deep enough to break the crust that may be formed by rains, but not deep enough to injure the roots, and as the ground is thoroughly pulverized all through, and at the same time left nearly level, it stands the drouth with little injury, and the result is a largely increased crop. Besides all this it is of no less value as a weed killer. The great cure of our richest lands is the weeds, and the longer it is cultivated the worse it becomes; corn fields are the breeding ground for them, and they ought to be the place to kill them. The trouble with the ordinary shovel cultivator is it "cuts and covers," and while the weeds are covered up the roots are not torn out, and soon as the cultivator stops they spring up and the corn fields become a swamp of weeds, which go to seed, and are ready to grow up again in the spring. The Albion cultivator with its five narrow spring teeth, or "bull tongues," on each side, cuts all the ground and tears out every weed by the roots each time it is cultivated, and by the time you have finished the season's cultivating, every weed seed that has sprouted has been torn out and killed, so there is nothing left to grow, and the corn fields are clean in the fall, and a few seasons thorough use of the Albion will

completely rid a farm of weeds.

It is also just the thing for fitting fall plowed land for spring crops, or where oats or spring grains are sown on corn stubble, this will fit the ground better than plowing. When the ground is plowed in the spring it is cold and not in good condition for crops as when it has been exposed to the sun and air. The Albion works the ground on top, where it is warm and in the right condition for the grain to sprout and grow rapidly, thoroughly pulverizing and making a like a garden. Then they get the benefit of the April showers, and are beyond the reach of harm before the dry weather comes, thus insuring a good crop. It is also much better for the land. How many times in clay soil is the ground injured by plowing when it is too wet, in the hurry to get it ready to sow oats, but the same ground was dry enough on top to work without injury, and with the Albion could have been fitted and the oats sown in time, without injuring the land. Then it is a great saving in labor and expense, twice over will fit any ordinary corn stubble, and by putting on the seeder attachment the grain can be sown at the same time. In this way 10 acres can be fitted and sown in two days, while to plow, harrow and sow the grain would require about eight days, making a saving of nearly three-fourths the labor. A very severe test was made the past season on the Michigan State Agricultural Farm, and corn stubble that was plowed and drilled gave no better results than where it was simply once over with the Albion. We herewith give Prof. Johnson's letter, who is well known to our readers:

AGRICULTURAL COLLEGE, Jan. 5, 1888.
Albion Manufacturing Co.

Your favor of December 27th at hand. Reply has been delayed on account of my absence. The Spring Tooth cultivator that you sent us in April, 1887, has given the best of satisfaction. We were plowing a 23 acre field of corn stubble for oats, when it came. We prepared four acres on one side of the field—a fair average of the field, so far as conditions of fertility were concerned—with your harrow, going over the stubble once, and then sowing with your seeder, and rolling the ground. The balance of the field was plowed, harrowed twice, then sown with drill and rolled. We took particular pains to notice and compare those sown with your harrow and seeder, with the others during the season of growth and when harvested, and we were not able to discover any difference in growth or yield. One seemed as good as the other, and while we were not able to thresh them separately, the harvested shocks indicated little or no difference in yield from those sown with the drill on plowed ground. The advantage of the harrow is seen in the less labor required in fitting the ground, and on account of working the surface only, ground can be prepared and will be fit for seed some days earlier than if plowed. The work and results with your harrow, in this test, exceeded our expectations. As a corn cultivator, my former, who has had large experience in corn culture, says: "For the first three or four cultivations the Albion cultivator excels any implement I ever saw." The ground is all out and thoroughly pulverized. I have for many years believed and advocated "level culture" for corn and all hard field crops. Your cultivator cannot be excelled in this respect. As a spring tooth cultivator we found it invaluable in preparing our wheat fields. It is an implement that needs only to be used to commend it to any good farmer.

SAMUEL JOHNSON,
Prof. of Agriculture.

A large number of farmers put in their oats the same way the past season, and all report as good and in most cases decidedly better crops, demonstrating beyond a question, this is by far the best way.

As this combines in one machine:

A riding corn cultivator costing from \$25 to \$35
A pulverizer or wheel harrow " " 40 " 45
A seeder " " " 35 " 50
Making a total cost of from \$100 to \$130

While the Albion as a corn cultivator and pulverizer or wheel harrow only costs \$40, and with the seeder attached \$65, making a saving of nearly half the cost, besides the annoyance of storing and keeping in repair all these separate machines. Having spring teeth it can be used on stony, grubby or new ground, and yet they are still enough so they will dig up the hardest ground, making it practical everywhere. With so many advantages it could not help being popular, and although almost a new machine it has the largest trade of any cultivator on the market to-day; it is a wonderful record when it is remembered that the great cultivator factories of the west have been long years building up their trade, and Michigan may be justly proud of the Albion. The secret of its success lies in the

STOCK-GROWERS' MEETING.

BANCROFT, March 2, 1888.

The annual meeting of the Shiawassee County Live Stock Growers' Association convened at Phillips' hall, Bancroft. Though the day was stormy a large and appreciative audience was present. E. S. Burnett called the meeting to order, and after adopting a constitution the following officers were elected for the ensuing year: President, Prof. A. J. Cook, of the Agricultural College; Vice-President, L. W. Barnes; Secretary and Treasurer, Quincy McBride, Burton; Directors, Frank Braden, J. W. Hibbard, F. G. Morris and Amos Parmeter.

J. W. Hibbard in a short address pointed out the objects of the Association, stating that our county was well adapted to all kinds of live stock, free from disease, and handy to market, and gave good reasons why the stock must go.

The afternoon session was well attended, with a large number of ladies present. Quincy McBride read a paper, "Does dairymaking pay?" L. W. Barnes, the noted Poland-China breeder, gave a paper on "The best breed for the common farmer?" It was well written and full of solid facts concerning this important branch of farming, after which a lively discussion followed, in which the Poland-China admirer tried to corner J. W. Hibbard (of Berkshire fame), but he left himself out easy in his usual way.

Jason Woodman, of Paw Paw, gave a pleasing address on social intermingling, such as farmers' clubs and granges, giving good reasons why men and women should cultivate and improve themselves as well as their farms and stock, leading them to a higher plane of life.

The question-box was opened; questions were asked about alsike clover as a forage plant, if cooking feed for swine pays. Also, are thoroughbred cattle profitable for the average farmer to breed. On this last there was a vast difference of opinion. One breeder of registered cattle argued that high grades were the best for the farmer, claiming that breeding thoroughbreds was the business of a specialist.

The evening session was opened with an address by Prof. Cook on farming, stock raising and feeding; speaking in high terms of the silo as an economizer of forage, giving an excellent feed for all farm animals, also of the benefit of the co-operation of breeders in making sales and other ways of helping each other. The Professor has a deep interest in the welfare of the county, for which the farmers of Shiawassee are under many obligations.

A. B. Clark, of Morrice, delivered an able address on the "Relation of the farmer to the business man," showing the wealth of the farmer, as compared with other branches of industry. The Association then adjourned. QUINCY MCBRIDE, Sec'y.

Breeding or Dehorning Without Effect on Those Horns.

ST. JOHNS, March 11, 1888.
To the Editor of the Michigan Farmer.

Have noticed the manner of dehorning cattle in the issue of March 3; now, let me give my experience: Bought a hornless cow at an auction, by appearance a cross between a Galloway and a Holstein. Had a seven-eighths grade Galloway, on both of which I used a registered Galloway bull from Canada. Grade Galloway dropped a nice bull calf, the Holstein cross a heifer, marked after herself, black and white. After about six weeks discovered that both calves were growing horns. Cut horns out down to the bone, seared wound with hot iron and smeared with tar. But the horns kept on growing. Cut them out a second time in same manner as at first, and still they grew! The bull I sold when a little over a year old. Have seen longer horns, but never any larger around for their age. The heifer's growth down beside her cheeks and are rather short. Has any one else struck any of the live-forever horns?

D. Q. PIERCE.

N. A. CLAPP'S SALE CATALOGUE OF SHORTHORNS.

The sale catalogue of pure bred Shorthorns owned by N. A. Clapp, to be sold April 4th at the farm near Wixom, is compiled, printed and ready for distribution. It is well gotten up, and gives in a concise way the plain facts in regard to the breeding of the animals, without any effort at extravagant laudation. The idea that Shorthorns are the best cattle in the world for the general farmer, when properly bred and handled, being good milkers, early maturers, and yielding a heavy carcass of the most excellent beef when fattened, seems to pervade the pages throughout.

The first animal in the catalogue is Ophelia Airdrie 3d, a red heifer of June 1, 1885, and of the Ophelia branch of the famous Renick Rose of Sharon tribe. Her sire was the Craggs bull, Gloster Wild Eyes 56239, whose sire was Geneva Wild Eyes 51776, and out of 6th Duchess of Gloster, by 20th Duke of Airdrie 13872. Her dam, Ophelia Airdrie 2nd, was by 4th Duke of Sharon 51309. His sire was the 4th Duke of Geneva 7931, and he out of Poppy 12th, by 4th Duke of Geneva 7931. Her grand dam was by the 20th Duke of Airdrie 13872 and he by the noted 10th Duke of Thorndale (28458). As Geneva Wild Eyes 51776 was by 4th Duke of Geneva 7931, it will be seen that in the first three top crosses Ophelia Airdrie 3d traces three times to one of the most famous Duke bulls, 4th Duke of Geneva, twice to 20th Duke of Airdrie and twice to the 10th Duke of Thorndale.

The next in the catalogue is Ophelia C, a heifer of Dec. 7, 1887. Her sire was Constance 2nd Duke 73483 and out of Ophelia Airdrie 3d above. Constance 2nd Duke was by Son of 4th Duke of Northumberland 4707 out of Constance of Putney 15th, by 2nd Duke of Northumberland 23868. This Son of 4th Duke of Northumberland was by the 4th Duke of Northumberland 23351, and he by the 14th Duke of Thorndale (28450) (that sold for \$17,900, the highest price bull ever sold in America) out of Lady Sale 32nd, by the 6th Duke of Geneva (30959), and he by Baron of Oxford (33571) a son of Imp. Duke of Gloster (11892). This Baron of Oxford was also the sire of the 4th and 8th Dukes of Geneva, (8th Duke sold for \$9,450) and 4th Duke of Onida 11709 that sold for \$7,600. The dam of 6th Duke of Geneva was 4th Duchess of Geneva, by Imp. Grand Duke of Oxford (16184) that was the grandsire of the \$35,000 10th Duchess of Geneva. Constance 2nd Duke's dam, Constance of Putney 15th, was by the well known 2nd Duke of Northumberland 23868, that won the sweepstakes prize of \$100 for the best bull of any age or breed at the Illinois State Fair in 1875, and was the sire of the five calves that won the \$50 prize for the best five calves of any breed. The 2nd Duke of Northumberland was by Earl of Grass Hill (36584) (a pure Princess) out of Lady Sale 32nd, by 6th Duke of Geneva. It will be seen that Ophelia C carries a combination of some of the best and costliest Shorthorn blood known.

Following in the catalogue we find three Pomona's, Rowena 15th, bred by A. S. Brooks, and two of her daughters. The Pomona's have occupied a prominent position both in the Brooks herd and that of Wm. Ball. They are reputed to be good general purpose cattle, being good feeders for beef and excellent milkers.

There are also three Victories, a family well known in the State, that are descended from one of the oldest English tribes. J. Thornton, the English auctioneer, says that tribe was celebrated, known and esteemed in the north of England since the days of the Brothers Colling.

Then there are several descendants of Stapleton Lass, another tribe that has been well known in the State. The note at the foot of the pedigree says: "Stapleton Lass was imported by an association of breeders of Madison County, Ohio, in 1853, and sold at their sale for \$1,350. From her has descended a tribe of Shorthorns that have been remarkably successful in the show ring and are invariably good milkers. Imported Isaac 559 and Buckeye Starlight (36298), both used on the Roses of Sharon, were of this tribe."

There is also included one female descendant of Imp. Miss Severs, a cow that was imported in company with the first Oxford bull ever brought to this country.

There are several others, but time and space forbid special mention.

The bull that has been extensively used, Constance 2nd Duke, is of the Constance tribe, well topped with Princess, Duchess and Oxford blood, and considering his high breeding is capable of occupying a position at the head of a well bred herd. The Constances descend from the same foundation as the Bates Waterloo tribe, and are classed as to value along with them.

Mrs. James Moore, of Milford, adds a well bred Young Mary, bred by Williams & Hamilton, of Kentucky; a Donna Maria, bred by Judge Jones, of Delaware, Ohio, and two Plumwood Lassies of the Dun sort.

There are just thirty Shorthorns catalogued that are to be sold without by-bidding, and there are three worthy of the consideration of the professional breeder as well as the general farmer. In fact, farmers ought to turn out on such occasions and secure good pure bred stock, to take the place of the slow growing, slow fattening, native cattle. There is nothing better to help the farmer out when the price of beef is low

than good cattle. A noted English feeder said: "The quality of the cattle with which the land is stocked is of far more importance than the rent." As this sale is the first, we think it will be a good place to secure bargains, as prices will advance later on, the reasons for which we have previously mentioned. Those interested can secure catalogues by addressing Mr. Clapp, at Wixom.

Veterinary Department.

Pterygium on the Eye of a Cow.

MUR, Iowa Co., March 19, 1888.

Veterinary Editor of the Michigan Farmer. What can you do for a cow's eye that is sore, cause unknown. It is the left eye, inside corner. When first observed a white film was growing over the eye from that corner, and was treated with burnt alum. At same time the muscles in the corner of eye appeared to be protruding, and have grown up about one-half to three-fourths of an inch, and look inflamed. The eye-ball is clear and looks healthy, as does the cow. Would the milk be unfit for use? It has not been used. Please answer in the FARMER and you will greatly oblige.

A SUBSCRIBER.

Answer.—The disease affecting the eye of your cow is a vascular film (called pterygium) growing over the conjunctiva, or external coat of the eye, of a flat triangular shape and fleshy appearance, usually growing from the inner pupil, and when covering any part of the pupil interfering with vision, but rarely causing total blindness. No application can be made to the eye that will remove it without causing blindness. The only remedy is a surgical operation, by which means it may be dissected off. If the eye is inflamed and watery, apply the following eye lotion twice a day: Tincture opium, six drachms; rose water, one pint; mix and apply with a clean soft sponge. It will not affect the milk of the animal.

Rheumatism of the Joints in a Mare.

LAFAYETTE, March 17, 1888.

Veterinary Editor of the Michigan Farmer. I have a 10 or 12 year old mare that has got the rheumatism I think. She has had it about five weeks now. The first of the attack was very severe, after the third or fourth day, when she would lie down all the time, attended with spasms of great pain. She would not get up, when she would go to eating again. Then she got up and stood up most of the time for the last two weeks, but for nearly a week now she will hold up her leg (the swelling is in it) near hind leg in the hock joint clear from the floor and keep it up, and of late she has not urinated good—hardly soils her bedding, and when she does it smells very strong. Would the practice of feeding her corn be injurious? What shall I do for her?

MASON S. ROE.

Answer.—The trouble with your mare is probably due to rheumatism of the joints, caused by an unhealthy condition of the blood, accompanied by stiffness, lameness, etc. Keep her in a comfortable warm box stall, well littered with clean straw. Give no corn or cornmeal to eat, but good clean oats and hay. Give internally the following drench, night and morning: Bi-carbonate soda, 12 ounces; salicylic acid, six ounces; mix and divide into twelve powders; give one in a pint of pure water night and morning. If the bowels are constipated, give the following: Sennae and aloes, pulverized, one ounce; Jamaica ginger root, pulp, half an ounce. Mix and divide into six powders, give one at noon in the feed, or mix with water to a paste and smear on the tongue with a wooden paddle.

Probably Goitre in a Horse.

WILLIAMSTON, March 19, 1888.

Veterinary Editor of the Michigan Farmer. I have a horse, seven years old, and his throat is swelled quite bad. I have used him all winter in teaming, and he eats well and feels well. I have more horses starting with the same disease. Please answer this in the next issue of the MICHIGAN FARMER and oblige.

A SUBSCRIBER.

Answer.—Without symptoms correctly described we have no landmarks to govern us in an attempt at diagnosing diseases in domestic animals. "His throat is swelled quite bad" would, in the absence of any other symptom, indicate a common form of disease in the throat of many horses in this part of the country, of the character of goitre. With few exceptions it is of little or no inconvenience to the animal. If the swelling is of recent origin, hot, tender to the touch, accompanied with cough, discharge from the nostrils, or any other symptoms you may observe, report to us, that we may diagnose the character of the disease, and we will try to aid you in its cure; otherwise we can only suggest the application of some preparation of iodine, or some of its compounds.

Sweeney in a Horse.

STUYVESANT, MEMPHIS CO., March 20th, 1888.

Veterinary Editor of the Michigan Farmer. Having had some good advice that benefited me personally, besides all the answers given to enquirers that have done me equally as much good as them (for I think your paper full of good things for the farmer and stock-raiser), I will come again for advice. Please tell me the best method to follow to cure a sweeney that was caused by a shoulder sprain last fall. The horse is eight years old, and had not been used to work; the first half day that I worked him to the plow he made a mis-step and went lame. The next step, when he stepped on the lame side he

Continued on eighth page.

The Horse.

COLLECTING STALLION FEES.

HADLEY, LAPEER CO., March 6th, 1888.
To the Editor of the Michigan Farmer:

Supposing A. owns a stallion and B. breeds his mare to him July 6th, with the understanding that he is to pay a stipulated sum when she is known to be with foal. March 3rd B. receives a letter requesting him to pay the stallion fees. Judging from the looks of the mare B. is unable to ascertain for a certainty whether she is in foal or not. Now, can A. compel B. to pay the fees now? And if not, when? Please answer through your columns and oblige.

A SUBSCRIBER.

From the above statement it is only necessary for each party to the agreement to observe its conditions to have the matter settled fairly. The whole question depends upon the fact as to whether or not the mare is in foal. If she is, the owner should settle as an honorable man. If not in foal, he should be personally examined. It is probable the owner of the stallion believed the mare to be in foal when he requested pay for the service; and if she is he is justly entitled to it. In all such transactions it is not only good policy, but, what is more important, it is right, to deal fairly and honorably. If this was always done there would be less money paid for lawyers and court expenses, less hard feelings between neighbors, and greater respect for each other.

AWAY OFF IN HIS FACTS.

The horse editor of the American Cultivator has some fine theories in regard to breeding horses, and no doubt he has a right to them, but when he changes facts to suit his theories he is liable to get set down on. Here, for instance, is a case in which he is away off.

"It is conceded now that the American trotting horse is the best in the world. Years ago superiority was conceded to English horses, and before that to the Arabian. We imported from both and improved on both. While England has some good horses, her breeders needed to continue Arabian importations, or their stock would run down. There is a significance in this to horse breeders. English climate is always overcast. That of Arabia is always dry, and our own is generally dry and bracing. The same atmospheric conditions that have made our people the most wide-awake, enterprising and indomitable in the world have apparently affected our horses also. Consider the localities in this country where our greatest trotters have been bred, all dry and generally on high or rolling lands. On the face of things it would evidently be a mistake for farmers on low, wet prairies, or in other sections where the climate is always moist, to expect to breed the best trotters."

The first assertion is correct; the second, as to the improvement we have made on English horses, is open to argument; and the third, that the English have to import Arabian horses to prevent deterioration in their own, is utterly devoid of truth. The "dry air high land" theory is all very well, but in the moist climate of England have been produced the greatest race of horses in the world, the thoroughbred, the finest heavy draft horses—such as the Shire and Suffolk Punch—no say nothing of the Cleveland Bay, which our horse men are paying big prices for. And the *Cultivator* suggests that an instance where a race horse has been successful on the English turf whose pedigree would show an infusion of Arabian blood within the last forty years. It has been tried at various times in that period, but always with the same result—entire failure. There is no race of horses in the world which can improve the English thoroughbred for the purposes for which he is bred, and he is the product of the skill and judgment of the English breeder just as much as the American trotter is of the American breeder. If this has been done in a climate unadapted naturally for producing such results, so much the more to his credit.

Quinine for Horse Distemper.

Quinine is said to be the favorite remedy at Woodburn Farm, Kentucky. Mr. L. Broadhead, the superintendent of that breeding establishment, is credited with having given his method of treatment for distemper as follows:

"Give for weanlings from fifteen to twenty grains a day. We generally give this quantity once a day, but when first taken and the fever is high, give about fifteen grains twice a day, morning and evening. If the attack is mild we give only one dose a day, and continue until the disease has left the system. The quinine always the fever and is good for the inflamed throat. It is an excellent tonic, and so far has cured every case we have had, about 150 in number. In the early spring we have had several very severe cases that I am sure we should have lost but for the quinine. These were yearlings, and we gave about twenty grains at a dose twice a day. Older horses can be given sixty grains a day, in two doses. Whenever you have fever in quinine freely, no matter what the disease. It is almost a specific for lung fever and pneumonia. I have cured two cases of lockjaw in sucklings this summer with quinine and alopathy, twenty drops of the latter to a dose. We are not particular to weigh the quinine, but guess at a dose. Put it in a spoon and place it on the tongue without elevating the head, or exciting the animal. We pull the tongue to one side, insert the spoon, turn it over and wipe on the tongue. It is easy to administer, and the animal gets it all. It is perfectly safe, and there is little, if any, danger in giving too much. As the weanlings in the south average considerably larger than our northern ones, a smaller dose would probably answer the purpose in this section. It might be better on the whole, to get it put up in ten grain powders. Then the quantity can be regulated very easily, for if fifteen grains is required, divide one of the powders in two, and add one half to one of the ten grain powders. As distemper is very prevalent in all sections of the country, the above directions should be remembered by those who have the care of horses."

A fair trial of Hood's Sarsaparilla for scurf, salt rheum, or any other affection caused by impure blood, or low state of the system, will be sufficient to convince any one of the superior and peculiar curative powers of this medicine. Buy it of your druggist 100 cents a dollar.

Horse Gossip.

THERE are 130 farms in the blue grass region of Kentucky devoted to the breeding of thoroughbreds and trotters.

KITEFOOT, 2:17½, will not be tracked this season, as she is still suffering from the injury received last year.

NALAD QUEEN, record 2:20½, by Gooding's Champion, was the highest priced animal sold at the recent Kentucky horse sale—\$5,000.

Dr. W. A. GIBSON, of Jackson, has sold to Charles Koch, of Clarksville, his two-year-old stallion colt sired by Omedeo Wilkes, dam Belladonna by Woodlawn. Price, \$500.

A. L. TOMP, of Carson City, has sold to Smith Bros., of Iowa, the bay mare Musette, foaled in 1878, by Magna Charta 105; dam Shoo Fly, by Zingero, thoroughbred.

MR. G. FILES, of Manistee, is reported to have bought a four-year-old mare by Bolton Sprague from Wisconsin parties. She is black, well gaited, and regarded as very promising.

W. S. KIRBY, of Galesburg, has sold to Geo. Zeigler, of Milwaukee, Wis., the three-year-old bay colt Frank B. (pacer), by Frank Noble (a full brother to Jerome Eddy 2:16½), dam by King Champion. Price, \$500.

The best feed for stallions is said to be good oats with one tablespoonful of flax seed mixed in it, and one teaspoonful of hemp seed twice a week. This is the ration fed by French breeders during the stallion season.

MR. WM. LOCKS, of Lapeer, has purchased the bay trotting colt, Hardwood Chief, from Mr. Shepard, of West Bay City. Hardwood Chief is by Hardwood 2049, he by Blackwood Jr., 380; dam by Swigert 650; 2d dam by Grey Eagle.

ROBERT STEELE, of Philadelphia, has sold to S. A. Browne & Co., of Kalamazoo, for \$2,500, Red Letter, bay filly, foaled 1886, by Nutwood 2:18½; dam Bonny Doon, by Aberdeen Red Letter is a full sister to Nutbreaker, three-year-old, record 2:24½.

We are informed that Mr. James Miller, of Paris, Ky., has refused an offer of \$12,000 for a half interest in Bourbon Wilkes, the street of Bonnie Wilkes and Netty Miller, owned by Messrs. Dewey & Stewart, of Owens. Wilkes blood comes high, and the boom appears to be growing.

And even the hyperborean regions are being invaded by the American trotter. It is reported that Judge J. D. Williams, of Marquette, this State, has purchased from Indiana parties the bay stallion Danamite 2:28, foaled 1868, by Hambletonian Downing; dam Maude, by Mambrino Patchen, Jr., paying for him \$3,500.

MR. F. MESSENGER, of Hillsdale, sold the four-year-old stallion Michigan Dictator 3:57, by Dictator, sire of Jay-Eye-See, 2:10; Phyllis, 2:13½; Director, 2:17, to Mr. W. T. Palmer, of Woodstock, Ill., and the five-year-old stallion Fred Sprague 3:56, by Gov. Sprague 4:44; dam Bertha, by Clark Chief 69, to Charles A. Snyder, of Elmwood, Ill. Terms private.

MESSRS. PARSONS & BALDWIN, of Watervliet, this State, write as follows: "We have sold to Messrs. F. N. & A. P. Green, of Olivet, the registered Percheron stallion Tempest 4:18, two years old this spring, bred by us, sired by Trojan 1205 (832); dam Florida 1490 (443), by the Government Approved Bonus 573 (786). Tempest is a very choice, evenly and well developed colt of wonderful action, coal black, in fact a typical Percheron of the class that has made the fame of the 'Perche' world-wide."

TOM PRON, the trotting stallion mentioned as having been brought to Jackson, this State, recently, from Kentucky, is described as a finely built, dark chestnut with heavy mane and tail. He stands fifteen hands one inch in height and weighs about 255 pounds. He was foaled May 12, 1886, was sired by Red Wilkes, dam by Mambrino Temple; 2d dam by Alexander's Abdallah, the sire of Goldsmith Maid; 3d dam Downy's Messenger; 4th dam by Whip Comet, and 5th dam by Grey Messenger. He ought to be a great horse.

The Farm.

Suggestions About Seeding.

It is difficult to establish any rule in practical agriculture that will, under all circumstances of soil and variable seasons, uniformly afford the most profitable returns. But if we admit that almost a universal adoption of practice by progressive farmers is improvement, then we must approve of drill seeding, for now there is seldom any grain sown in this State otherwise than with drill. In my early experience of wheat-growing, over fifty years ago, we knew no other way of seeding than by hand-sowing, and covering with harrow or with plow, turning a light furrow, which more perfectly covered the seed. To distribute the seed evenly required much care and skill, but when the seed was evenly sown and well covered many farmers were unwilling to admit that drill seeding was any improvement over the old method. Some of the largest yields of wheat in Western New York were obtained by broadcast seeding, and yet I think that damage by frosts in spring by heaving the plants out of the ground was often suffered from since drill seeding has been adopted. My practice for many years of almost exclusive wheat-growing was to sow broadcast and cover with cultivator and harrow, and then roll the surface down smooth; and during this period my average yields were as good as drill seeding has been adopted. I had frequent yields of forty bushels, and sometimes exceeding that, per acre. One of the largest yields I have any knowledge of was raised by my father at an early day on the farm I now occupy. It was sown by hand, 1½ bushels per acre, and covered with plow and leveled with harrow. The yield on one acre was 62 bushels, and on the remainder of the field of 10 acres the yield was between 50 and 60 bushels.

I held the old system for some years, claiming that I raised larger yields of wheat than my neighbors who drilled, but I finally concluded that my better yields were due to better cultivation. In later years I adopted drill husbandry for almost every farm crop. I drill wheat, oats, barley, corn, beans, and sometimes seed potatoes. In this system the advantages are: Less seed required; uniformity of covering; safety against a leaving soil in winter grain, and a better

yield, due to equal distribution of seed and a freer circulation of air between the plants. Many farmers fail by drilling in too much seed, as there is more liability of choking the plants in the drill-mark than when broadcasted over the whole surface. One and a half bushels of seed for all small grains is heavy seeding, and I would rather have less than more. Corn should be drilled one peck per acre in drills three and a half to four feet distant, but thin out to one stalk to 12 or 18 inches in the drill. In winter-wheat drilling there is great benefit by leaving the plants in the drill-marks and a ridge between, which will, by the action of frosts, work down around the plants and hold them more firmly; and then in seeding clover and grass, as I do on all winter-wheat ground, if covered by such action of the frosts and make the catch more probable. Then, again, in the use of commercial fertilizers, the combined drill, dropping the fertilizer with the seed where it will be most readily taken up by the growing plants, is of great utility. Broadcast seeders and covers have been introduced here, but find little favor. Drill-teeth should not run so deep as to cover the seed more than one inch deep in the soil, not even if the soil be dry so that seed will not readily germinate. I would rather have the seed lie in a dry soil till rain can be planted deeper.—N. Y. Tribune.

Early Planting of Potatoes.
A correspondent propounds a query concerning potato culture to the Elmira Farmer's Club, which the Secretary answers "according to the best of his understanding."

"I have a field of ten acres that I shall plant with potatoes—soil gravelly loam—in November and dry enough to work in early spring. Shall I plant as soon as preparation can be made after the frost is out, or wait until the ground is warmed by the sun?"

While there are various conditions not noted and the question needs careful thought which it is hoped correspondents will give, a few points may be noted now.

If the crop is to be marketed early, or as soon as the tubers reach edible size, by all means plant early—the planting cannot be too early after frost is out to the depth required for working. There have been seasons when potatoes for early use have done well when the planting has been in March. Of course the start will be slow when the planting is very early, but every gain counts something when the crop is to be marketed early.

So much for early planting with the purpose of obtaining an early market. But many other purposes and conditions must be considered if general answer to the question is to be given. There are early and late varieties, requiring different methods of planting, difference of time and treatment. For winter use potatoes should be ripened not much before autumn frosts, and as a rule, late varieties are better than early. If the crop is to be sold in autumn it would be poor policy to have it out in September, or earlier, hence the necessity of planning to have it ready when the market is also ready. It is believed by most farmers that larger crops can be obtained from planting in May, or the last of April than from earlier planting, because more favorable cultivation can be given during the period of growth. This is a matter to be considered, because vigorous growth lessens liability to injury from beetles. Many other conditions enter into the problem presented, any one not intelligently considered opening the way to error and possible loss.

Use of Nitrogen.

Prof. Atwater, in a lecture upon the progress in the application of science to plant culture, before the Massachusetts Horticultural Society, gave some account of experiments in the use of nitrogen. The result of these experiments was that for every 100 bushels of corn obtained with mixed mineral fertilizers, we get by adding 24 pounds of nitrogen per acre 111 bushels; with 48 pounds of nitrogen, 112; and with 72 pounds of nitrogen in addition to the mixed minerals, 115 bushels. The yield of corn was slightly increased by the nitrogen, but the gain was extremely small—out of all proportion to the large cost of nitrogen. Potatoes give a much more decided response to the nitrogen, 24 pounds increasing the yield from 100 to 127, 48 pounds bringing it up to 138; while with 72 pounds it was only 127. Oats responded much more vigorously to the nitrogen, the yield rising up to 171 bushels with the largest amount. These experiments as far as they go, therefore imply that we should in general be sparing with our use of nitrogen for corn, that we may use moderate quantities on potatoes with profit, and that oats are especially benefited by it.

In regard to whether plants obtain any considerable quantity of nitrogen from the air, Professor Atwater said that for fifty years these problems have been discussed. For a long period a negative answer to this question seemed probable, but of late the tendency of research has been in the other direction. The experimental testimony regarding the acquisition of atmospheric nitrogen by plants is conflicting. But the evidence against it which comes from the laboratory and greenhouse is based upon experiments whose conditions were more or less abnormal in respect to food supply or access of nitrogen compounds or otherwise, and may have hindered the action of electricity, if not of nitrogen-fixing microorganisms, two agencies towards which late research points as possible, if not certain, factors in the fixation of nitrogen. On the other hand, the evidence in favor of the acquisition of nitrogen by plants, legumes especially, from the atmosphere during their period of growth, is direct and positive. In pot experiments the gain has been at times very large, and in comparative trials it has been larger or smaller in proportion as the conditions have been more or less nearly normal. Less accurate, but at the same time very strong, evidence in the same direction comes from experiments in the field. The conclusion that plants acquire atmospheric nitrogen accords with and explains facts of vegetable production otherwise unexplained.

Unless future research should bring evidence directly opposed to the best now at hand it must be believed that the greater part of the nitrogen which the plants obtain from the air comes through the foliage. The

faculty of obtaining nitrogen from the air appears to be especially characteristic of the legumes.

Professor Hellriegel, of Germany, in 1887 announced experiments in which leguminous plants were found to obtain large quantities of nitrogen from the air.

Professor Wolff, the mentor of German agricultural chemists, was present at the meeting when these experiments were announced, and elated some experiments of his own which confirmed Prof. Hellriegel's conclusions that somehow or other the plants did get hold of nitrogen and of the free nitrogen of the air, and that in considerable quantities.

Messrs. Lawes and Gilbert summarize their present view of this question as follows: Regarding the materials which plants may obtain through their roots from the soil they say that "upon the whole it seems probable that green leaved plants can take soluble complex nitrogenous organic bodies * * * and that they can transform them and appropriate their nitrogen."

Experiments with Potatoes.
The annual report of the New York Experimental Station details the results of a large number of experiments with the cultivation of potatoes, with more than a hundred sorts of those most commonly known. The average yield of merchantable potatoes of all these sorts was 129 bushels to the acre, the Green Mountain yielding the most, or a little more than 285 bushels per acre. In contrast with these, Brownell's No. 55, Buffalo Bill and Crane's Keeper yielded none that were merchantable. Experiments were made to test the comparative productivity of seed taken from the most productive and the least productive hills of any sort. The result was that the largest tubers from the productive hills used as seed gave the largest crop, and the smaller tubers from the same hills gave the next largest crop, while the largest tubers from the small hills came in third, and the smallest fourth. This was not the invariable result, but it was so in a great majority of instances. Again—in the trials which were made with whole potatoes, and by cutting the seed, the cut pieces weighing the same as the whole ones, there was no difference on the average in the product. Exposing the cuttings to the air for a week or ten days before planting, did no harm nor good; but a longer exposure proved injurious and hindered the growth.

Agricultural Items.
ALL the men who have a horse or two to sell are giving it a big send-off in the papers this spring.

The Philadelphia Press says farmers should remember that a few hours' work in an ill-fitting collar may do a horse for a good many days.

WHEAT was first sown in the United States in 1602. The Plymouth colony sowed it in 1629. The varieties are now, very numerous; one experimenter having raised 322 sorts.

OATS, says an Indiana farmer, are one of the best crops that can be grown on a small farm. Sow early, and if possible the ground should be plowed in the fall. They make an excellent summer feed, cut and mixed with meal or bran.

W. F. MASSEY says it will pay any farmer to carry in his pocket a powerful lens, to examine seeds, insects, etc. Such a glass will surely detect foreign seeds in grass or clover seed.

The Rural New Yorker thinks that the system of threshing corn fodder ranks with the silo as a measure of farm economy. Corn and stalks must be perfectly dry to realize the best results. A better machine for the purpose than the ordinary threshing machine is needed.

AN experienced breeder of swine says that often when the hogs are sluggish and indolent about eating, nothing in the world will stir them but the toothache. You will see the poor victim going about with his head sideways. You can detect these bad teeth very easily. They are darker than the rest, and often partly broken off or decayed; and the gums are more or less ulcerated in the more advanced stages.

LIME and salt operate to liberate plant food in the soil that is in such combination that it is not accessible or "usable" by growing vegetation. The most obvious action of lime in this case is in hastening the decay of animal and vegetable matter in the soil. Lime is not economically used on soils that are deficient in organic matter. Lime itself is not a manure but only a very efficient agent in rendering manures available to the crops.

MAJOR ALVORD, in the American Cultivator, remarks that farmers in their cultivation at having found a cheap reason for cattle, in ensilage, must not feel it to excess or exclusively for any length of time to animals expected to grow or produce milk. A cow at Houghton Farm whose average yield of milk was ten quarts daily, was fed exclusively on ensilage—being allowed all she wanted—for a year, and fell off so that it was feared she would dry or scarce. Then a grain ration was added, and she recovered her yield.

S. S. BAILY, in a paper before the West Michigan Farmers' Club, advises farmers to sell from the farm such money products as will least exhaust the soil and at the same time give fair and profitable return for capital and muscle and brains invested. So farm the soil as to sell as little hay and grain from the farm as possible; but sell instead milk, butter, cheese, well-bred live stock, wool, and fruits, as the latter remove less fertility from the farm than the former for the money received. Farms now rich can be kept so by judicious cropping and feeding, and by properly husbanding and applying all the manure that the farm and stock can make. Farms now comparatively poor can be made rich in time by green manuring with rye and red clover and chemical fertilizers, and by the keeping of stock and feeding to the stock crops grown on the farm and as much of purchased products as can be bought for profitable feeding. The fertility in a good farm that has never been abused is practically inexhaustible if rightly managed.

Consumption Surely Cured.
To the Editor:—Please inform your readers that I have a positive remedy for the above named disease. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any one of your readers who have consumption if they will send me their Express and P. O. address.

Respectfully,
T. A. SLOCUM, M. 181 Pearl St., New York

The Poultry Yard.

The Most Profitable Hen.

According to the *Game Poultry Journal*, the most profitable hen for eggs is the pullet or hen only one year of age, that is, when eggs are sold by count, not by weight. Hence the very frequent advice to kill off old hens each year and keep only the pullets, is followed to a great extent. This advice is no doubt very valuable to those who intend to raise and market eggs only.

A two-year-old or a three-year-old hen will probably lay a smaller number of eggs, but it is very doubtful if she produces a less weight of eggs. Each egg will be larger than those laid by her in the first season, but the smallness of the number will be offset by the greater size. These larger eggs are most suitable for hatching. The hen is fully matured, she is in robust health, she has her full strength, and the chicks from her eggs will inherit these characteristics. There being in the egg a greater quantity of white out of which the chick is formed, and also a larger amount of yolk upon which its life in the shell is supported, the chick will be larger when hatched, and possess more vitality, and its chances for surviving the ills of chickenhood will be correspondingly brighter. To ensure a good growth there is nothing like having a good start. This increased vigor and size at the start will follow the chick all through its course, and the matured fowl will be larger and stronger thereafter.

It is the practice of a well-known breeder of Light Brahmas to keep over, year after year, his strong robust hens. So long as they lay eggs enough to produce a good brood of chicks they are considered worthy of preservation. This breeder's strain of Light Brahmas is noted for its great size, and while it may be well doubted if it would be generally profitable to keep hens until they are five or six years old, it would be profitable to follow his example to the extent of only breeding from matured hens.

It is not to be denied that pullets often prove fine breeders, especially where they were hatched early the previous year, but probably these same pullets would prove still better breeders, if used for that purpose the following year. It is reasonable to expect that such should be the fact, and the observation and experience of poultry breeders generally will tend to prove that such is the fact. The wise breeder will not kill off his old hens, but will retain the best of them for the choicest breeding pens, using his finest pullets for laying stock and reserving them for breeders when they are two or three years old. He will practice what he preaches, and his text will be, "Pullets for layers, old hens for breeders, and strong chicks as the natural outcome."

NEST BOXES should be whitewashed once a year and the nest material changed once a month. After changing the nest material, sprinkle about a teaspoonful of sulphur in it. The warmth of the hen's body starts the sulphur fumes, and she fumigates herself while laying. Tobacco-stems from the cigar factories are also used as a preventive of vermin, but the sulphur is more easily obtained and easy to use. Carbolic nest eggs are advertised as vermin exterminators, but it seems probable that these must exhaust their disinfecting properties in time and cease to be valuable.

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CURES Nervous Prostration, Nervous Headache, Neuralgia, Nervous Weakness, Stomach and Liver Diseases, and all Affections of the Kidneys.
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The highest market price paid for dressed or live poultry, fresh eggs and choice butter.

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Respectfully,
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Horticultural.

RECENT PROGRESS IN THE STUDY AND TREATMENT OF THE DISEASES OF PLANTS.

[A Paper read by Prof. V. M. Spalding, at the March Meeting of the Washington County Horticultural Society.]

There is a feeling not infrequently expressed that the study of vegetable pathology is too theoretical, that all the time is given to the investigation of matters of a purely scientific nature, and that practical results are not forthcoming. Accordingly I would like to devote the time at my disposal to a brief review of what has actually been accomplished in a practical way within the past few years, endeavoring to answer the question whether we do really know any better than we did five years ago, the nature and causes of the various diseases that prey upon our fruits, flowers and grains, and the means of combating them.

Considering the small number of investigators and the difficulties to be overcome, there has been most gratifying progress. In this country there are hardly more than half a dozen men who are making plant diseases a special study, and most of these are obliged to carry on the duties of an exacting profession at the same time. Edward S. Murray at Cambridge, Barrill of the University of Illinois, Trelease of St. Louis, Arthur, formerly of the N. Y. Experimental Station, Sanborn at the Department of Agriculture, and Mr. E. S. Smith of the University of Michigan, make up the list of those who can fairly be called specialists in this line. In Europe the case is better. Even there the number of those who are engaged in this study is not large, but there is a better division of labor and a generous provision is made for securing the necessary facilities with which to work advantageously. DeBary, of Strasburg, and Winters, of Leipzig, whose recent deaths have removed two of the most illustrious names of the world of botanical investigators, Cornu and Viala in France, Von Thunen in Austria, and Frank and Sorauer in Germany, are a few of the European to whom we have made the most important contributions to our present knowledge of vegetable pathology.

Attention deserves to be specially called to the methods of investigation that have been uniformly adopted and consistently maintained. The causes of disease have consisted of the human system, and this notwithstanding the fact that the "therapeutics" of plants hardly as many years as the theory and practice of medicine does centuries.

Returning to a recent work on the subject, I find the name of some thirty-five diseases of cultivated plants, due to the influence of many different parasitic organisms, and in nearly every case the structure, habits and mode of action of the parasite, and its effects are clearly and accurately described and the means of combating it satisfactorily indicated.

Without attempting even a summary of these, it will be of interest to notice a few of the more important diseases treated of in the work referred to, as an illustration of the definite scientific knowledge that is rapidly taking the place of vague theories and uncertain experiments.

The first part of the work is devoted to the diseases of farm crops, the rusts of wheat and other grains, smut of oats, wheat, barley and corn, and the various diseases of clover, alfalfa and other forage crops. These may be briefly stated that the remedies or preventions are presented clearly and judiciously and with manifest reference to their practical application, both as regards time and expense. To illustrate in reference to a single class of diseases—the smuts—that affect a large number of cultivated and wild grasses and grains and are often highly destructive, it is shown that they all have essentially the same development history, attack the plants that they infest in the same way, and that the same means are to be employed against them.

Signs it has been experimentally proven that infection takes place in young plants just starting from the ground, while older ones are exempt, that moisture and the use of fresh manure favor the development of the parasite, which, furthermore, has been shown to be capable of existing for an indefinite series of generations in certain yeast-like forms, ready to penetrate the plants attacked by them whenever favorable conditions are present. Portions of more than fifteen years' work, spent by the author in working out the complete life history of a single one of these smuts, and facts concerning others have been slowly and laboriously accumulated, but they are now so far understood that it is possible to give full and explicit directions for meeting and controlling them.

Without lingering upon these, however, it is desirable to pass at once to what is of more immediate interest to horticulturists, viz., the results of recent investigations in Europe, and especially in this country, of the diseases of garden and orchard crops.

Of all these the diseases of the vine have received the most attention. The French and Italian governments, as well as our own, have made provision for their special study and, even within the last year or two, some highly important contributions to our knowledge of this subject have appeared. One of these, entitled a "Report on the Fungus Diseases of the Grape Vine," was sent out by the U. S. Department of Agriculture in 1886. It is one of the most creditable pieces of work that has ever issued from that department. It describes clearly and accurately the common "downy mildew," the "powdery mildew" and "black rot" of the grape, besides several other diseases less widely known, and prescribes specific methods of treatment which have been successfully tried in Italy and France and to some extent in the United States. There is every reason to believe that the thorough and exhaustive study that has thus been made of the fungus diseases of the grape vine, together with the numerous experiments that have been conducted step by step with it, have furnished a foundation for the successful treatment of the most dangerous enemies of the vine in this country, and it is safe to say that, with the information accessible in this and similar publications, grape growers in the eastern United States may go on and extend their vineyards with reasonable confidence of reward as far as parasitic diseases are concerned.

Within a few years some very important contributions have been made at the Cryptogamic laboratory of Harvard University, besides numerous other papers by the professor in charge, that on the "black knot" of the plum and cherry is one of the most complete and satisfactory. In this, from the first time, the complete history of the nature and development of this disease and the means of checking it were fully discussed. Still more important, from a scientific as well as practical standpoint, are the later researches of Dr. Farlow on the oak-leaf miner, in some portions of the country have proven highly destructive to apple trees.

The fungi producing these rusts are now known to infest cedar trees during a portion of their cycle of development and to pass from them to apple trees; and it has also been shown that certain varieties, notably wild crab apples, are much more liable to infection than other kinds. From these facts, which it has taken the labor of many years to establish, the following preventive

measures are indicated. 1. The cutting out of red cedars where they have been allowed to grow in the vicinity of apple orchards. 2. The destruction of wild crab apple trees that harbor the disease. 3. The selection of varieties for cultivation that are least susceptible to its attacks.

In Europe the same connection has been shown to exist between a similar parasite of cultivated pear trees and a fungus that infects the common Savine used for hedges, and in Switzerland the destruction of the hedges infested by the fungus has been followed by the disappearance of the rust from the pear trees.

An extended and useful study of the pear blight has recently been carried on at the New York Agricultural Experiment Station, the results of which are recorded in the report of the botanist for the years 1885 and 1886. The experiments conducted by Professor Arthur seem entirely conclusive and there is no reasonable doubt that the cause of the disease has been found in a minute organism, classed with the bacteria. Experiments have not yet been sufficiently numerous to permit of the most certain methods of dealing with the disease, but with the cause and nature of the disease definitely settled, a number of remedies that have hitherto been proposed and practiced can now be set aside as worthless and the way cleared for the inauguration of more rational measures.

The Agricultural Experiment Station of our neighboring State of Wisconsin has recently recorded some interesting and valuable results of the study of the diseases of fruits on which there may be specially mentioned the spot and scab of strawberry leaves, which within a few years has proven highly destructive to certain varieties of strawberries in common cultivation. The description of the parasite, the indication of its mode of action, and the directions for checking the difficulty by burning over the beds are the main features of the report for which we have to thank Professor Trelease.

At the University of Illinois, Professor T. J. Barrill has for a number of years continued his researches in this direction and has produced a good deal of valuable information concerning certain common and destructive diseases of plants, especially of known, parasitic diseases. One of these is the orange rust of raspberry and blackberry leaves, common enough about Ann Arbor, and of wide occurrence elsewhere. Another is the "scab" of the same plants, which is conspicuous, but in some localities is more destructive. For both of these the remedies already indicated by experience are recommended, viz., cutting out the canes as soon as the berries are picked, keeping the fields clean, and choosing for cultivation such varieties as have proven less liable to attack.

During the past year an important undertaking has been inaugurated at the Agricultural Experiment Station at Washington, causing observations to be recorded, by which the occurrence and prevalence of various plant diseases in different parts of the country are distributed, and with a view of obtaining data for the distribution and progress and the conditions on which these depend. Thus a long list is given in a recent report of the Department, of the occurrence and destructive effects of such diseases in western New York in 1886, and a corresponding account for the same year of those occurring in Michigan and in the vicinity of Washington. The value of comparative observations of this kind can hardly be overestimated.

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some old shed till wanted in the spring. About three months before it is safe to set plants in the open ground we make a hot-bed and sow the seed. In about six weeks the plants will be three or four inches high, when a milder hot-bed is made and the canes set in as thick as they will stand, and filled with rich soil. Into each of these cans is set one plant and allowed four or five weeks until they begin to crowd, when they should be separated so as to give plenty of room and let stand till safe to plant out. When the ground is marked off take a spade and throw out a spadeful of soil where each plant is to grow (if a little bone dust or other fertilizer is mixed in, all the better).

Now lift the plant, can, soil and all, and set in boxes convenient to handle and haul to the field; set can and all into the hole so that when the soil is drawn in the surface will be about an inch higher than the can. Cut the wire with a nipper and lift off the can, this will leave the roots absolutely undisturbed. Hoe in the soil and the work is done. Plants so set will never wilt. It is a good plan to wet the plants well before lifting from the bed. In this way I have often made a good thing off an acre of plants before others have any to sell. A great deal depends on the seed you sow.

Juries on Horticulture.

In recently commenting on the case of Gardner Bowles, we compared the average London juryman to a strawberry slug. The result was that we received letters from some of our readers who reside in London, occasionally serve on juries, and who strongly—in one case to the extent of six pages—object to being classed as insect pests. In future, therefore, we shall keep our opinion of juryman private. This resolve precludes us from expressing our opinion of the intellectual capacity of the coroner's jury, who found that a retired officer "died through eating an apple." It appears that the unfortunate man—some what advanced in life—at a hearty meal, supper, after which he polished off a small apple and retired to bed, in which he was found dead the next morning. The jury found that the apple killed him! Moral: Eat no more apples, but go on consuming heavy meat suppers. The account of this inquest is now going the round of the papers headed "Killed by an Apple." Who would talk about strawberry slugs after this?

The absurd verdict in the case just mentioned reminds us of the fruit-grower who, owing to numerous robberies, had directed one of his servants to parade the orchard at night with a loaded gun. The fruit grower, hearing a noise one night, rushed out, and was shot dead by his too zealous employee, who did not recognize his master in the dark. The sorrowing widow put up over the grave a handsome tomb, with the inscription, "Well done, thou good and faithful servant."—*Horticultural Times.*

The Uses of Pyrethrum.

Prof. C. H. Fernald, of the Massachusetts Agricultural College, in a paper read before the State Horticultural Society, said that the common squash-bug does not consume the surface of the leaf, but forces its tubular mouth parts through the epidermis, and draws its food from the inside of the leaf, and is not affected by poisons on the surface. Pyrethrum has been found excellent. It may be used as a powder, or dusted on by means of bellows, or in solution in water, which is most economical and efficient. The bulk of the powder is dissolved in the water, to which it at once imparts its insecticidal principle. No stirring is necessary, but it should be applied in a very fine spray; the finer the more economical is its use, and the greater the chances of its reaching all the insects. It must be used when first mixed, for if allowed to stand it gradually loses its power.

Pyrethrum is also an excellent insecticide for the cabbage butterfly, all kinds of plant lice, flea beetles, trips on rose bushes and grapevines, and many other insects, but it is liable to be adulterated, and one should be very careful to purchase only that which is pure. It has the great advantage of being harmless to man and the domestic animals, and may be used with impunity upon Paris green or London purple would require great caution. Half an ounce stirred in two gallons of water was sufficiently strong to kill any ordinary naked caterpillar when showered on them, but was not strong enough to kill the most hardy of such as are protected by a dense hairy covering.

The rose beetle is a very common pest and feeds on so many different plants as to make it much more troublesome than if it confined its attacks to one plant alone. If they infest a plant on which it is safe to use Paris green, this will be a most effective remedy; elsewhere pyrethrum may be used.

Plants in Hanging Baskets or Vases.

All plants grown in a confined space, such as a flower-pot, hanging basket, or vase, if in a free-growing stage, very soon fill the space with roots, and unless fed with something better than plain water, are very apt to come to a standstill. Even though looking fairly green in color, and not particularly unhealthy, they will nevertheless furnish but a slim amount of flowers. The plants plainly require something in the way of a stimulant. An occasional watering with liquid manure is the old practice, and is not bad even now, provided the dose is administered with some kind of regularity, as for example, say once a week. Sometimes when this application is not available, recourse must be had to some other means. A good practice is to mix a portion of bone-dust with the soil before filling. This has an excellent effect, as the bones are not quickly dissolved. A first supply will easily last all the summer, and a liberal supply of water will usually ensure good results. However, it often happens that it is too late to mix the dust in the earth. In this case we have found it highly beneficial to apply the bone-dust in the form of a dressing, mixed with some soil. Every time the soil is watered, a portion of the fertilizing element of the bones is dissolved, and washed down among the roots. Another common error is to fill the pot or basket so full of soil that it leaves no room for water. The consequence is that only a portion of the soil becomes wet with a continuous application, which may be obviated by just building up the side of the basket with moss, clay, cow manure, or all combined, so that a basin is formed, which will hold water enough to soak through the

whole mass. A very thrifty plant or plants, occupying only a circumscribed space with their roots, will rarely be injured by overwatering in a climate like we usually have in summer; while the reverse is very common. The highest style of plant-growing in pots is obtained only by never allowing the plant to suffer for want of water, and by having either in the soil, or supplying it artificially in the water, plant food that the rootlets can take up.—*Horticultural Times.*

The Black Knot.

Prof. Prentiss told the Western New York Horticultural Society that the black knot on plum trees, it is now well established, is caused by a fungus, the native habitat of which seems to be some of our wild cherry trees. It is not known across the Atlantic.

If a recently infected branch is examined in May or June with a small magnifying glass, the filaments can be seen. These are threads which bear spores, and the latter fall off, and perhaps produce black knot elsewhere. After a while the black crust forms, the filaments are growing and enlarging, until they appear to be one whole body. Elongated scales grow into the inside, and these contain another form of spores, which continue to develop and ripen during winter, and are mature perhaps in middle of January. They fall out through an opening of the crust, and when they lodge in a favorable position, will germinate and produce new knots. Part of the structure grows within the branch, even under the bark, and kills it.

Whenever and wherever the disease appears, the infected parts should at once be cut off and burned. Look out for infected wild cherries in the vicinity. There is hardly any danger from infection by the use of knife, as the disease is not in the juice. No remedy is known, except the knife. Always cut at least two or three inches below the diseased portion, or a new knot may form below the old one without spores.

The Novice's Selection.

If we were to plant but one standard variety of strawberries for home use and market, we would select Wilson or Sharpless; if two, both varieties; next we would add as follows in about the order named: May King, Crescent, Manchester, Chas. Downing, Parry. We will not now speak of the novelties. There are many, and the most promising should be tried by every interested grower, at least in a small way.

Of red raspberries, we would select first of all, Cuthbert, next Turner, Marlboro; and Hansell, if an extra early sort is desired.

Among the yellows we know of none equaling Golden Queen.

Shaffer's Colossal is yet our first choice for home use among the cap sorts; next comes Souhegan for early, and Gregg for late. For evaporating purposes we would plant Gregg in preference to any other.

Among the blackberries we would plant Kittatinny first, then Lawton; Early Harvest for an extra early, and Taylor's Prolific for an extra early sort.—*Orchard and Garden.*

Inquiries about Cranberries.

Editor of the Michigan Farmer, March 10, 1888. To the Editor of the Michigan Farmer: Would like to know if any of the readers of the MICHIGAN FARMER have had any experience in getting a marsh set with cranberries? What kind of marsh is best for cranberries? How are they started, by the berries, cuttings, or roots?

SUBSCRIBER.

A Query for Prof. Cook.

ALLEGAN, March 8, 1888. To the Editor of the Michigan Farmer:

I wish to ask A. J. Cook, or any one else who can give the information whether, in using London purple as strong as he recommended for spraying orchards, that is, one pound of the poison to fifty gallons of water, there would be any danger to hogs that were being pastured in the orchard?

I have three acres of Baldwin apple trees, and I want to pasture the orchard with forty or fifty hogs the coming summer. Will the hogs damage the trees in rooting among the roots? If they do, will not the manure that they scatter over the orchard balance the damage?

Please answer through the FARMER.

J. A. FROST.

Horticultural Notes.

Some of the fruit trees of Australia were sent there from Rochester, N. Y., 35 years ago, and now the fruit from them is sent to England.

STEELE'S Rens sold in the Detroit market the second week in March for \$4.50 per barrel and were retailed in the groceries at seven cents a quart. The fruit was not of the best quality, either.

The culture of the apple and pear is on the decline in Illinois. The trees of the old time are dead or dying. Few new orchards are being set.

MAT CRAWFORD, of Ohio, recommends culture for blackberries. Some very old plantations are never cultivated, and special mulchings.

W. ROSS, of Benton Harbor, will raise twelve acres of melons at that place, put in thirty acres near Torro Haute, Ind.

The demand for canned asparagus is increasing yearly, and growers are overstocking the market.

The first half acre planted to asparagus on Long Island, which is producing, was set out replanting, was broken up, and two-thirds carted off. When the first half acre was set out, it often gave 50 bunches a each at a day's cutting.

Strasburg, Pa., has as are grown in rows in 12-inch spaces, others in larger boxes to insure the growth to large specimens.

One hundred hour during springtime, J. V. Kenyon, Glens Falls, made \$14 one day, \$74.50 one week, and \$200 a day. Frosts and catenae free.

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An English gardener, who has been in search of a clean fertilizer for strawberries, to avoid the annoyance incident to weeds and grass, has made it a practice during many years past to fertilize the ground where strawberry plants are growing by the application of oil meal and wood ashes spread about the plants and worked into the soil. The growing plants will find all the essential elements of fertility in these substances, both for making strong and vigorous plants and developing large and beautiful berries. The substances can be applied at any season of the year, and one may distribute a generous sprinkling about every plant without fear of producing weeds or grass, or injuring the growth of the crop by too much manure. Still the better time to apply such fertilizers is late in autumn, so that all the elements of fertility in the coarse materials may be rendered available before the next growing season.

Apianarian.

The United States sent \$135,000 worth of honey to Great Britain in the year 1886.

COLORADO honey is said to be of better quality than that of California, and worth a couple of cents per pound more in the market.

RESPECTING the proper temperature of a bee-cellar, W. Crowley, of Minnesota, says he wants for successful wintering a temperature ranging from 30 to 35 degrees to ensure the best results.

Z. A. CLARK, of Arkadelphia, Ark., is in trouble for keeping bees within the city limits against an ordinance enacted by the city government. Mr. Clark is poor but plucky; and though he has appeared in court three times, been fined \$5, and denied the right of trial by jury, he is not crushed. The Bee-keepers' Union has sent him \$25 toward his attorney's fees.

MR. PHELPS, of Pennsylvania, thinks good extracted honey costs just as much as comb honey. It takes the bees just as long to produce the one as the other. His first consideration is to get all the honey produced possible. It cannot be made to sell as well as comb honey. Then there is the cost of packages and trouble in getting them back again.

The idea that "bees work for nothing and board themselves" must be banished from our thoughts before we secure much profit from them. Successful beekeeping means work for a man with brains enough to know that he must leave no stone unturned that tends towards success. Good bees, good hives, lots of brood and bees, the right time, etc., in the hands of such a man, are a power that rolls up tons of honey, and shows to the mass of people that there is money in the business.—G. M. Doolittle.

A CORRESPONDENT of the Canadian Bee Journal says that in Malta the natives keep bees largely in earthenware pots, about a foot in diameter and one and a half long, shaped like a stump-necked bottle, the mouth being filled by a stone bung with four channels for the bees to pass through; but this they invariably refuse to do, and prefer to use the big end, which is simply covered loosely with a board, the pot being on its side, and generally on the ground, and under a tree. Consequently you can imagine the assortment of creatures to be found inside. The natives take the honey and wax once a year, and leave little or no stores, and are astonished at the loss in numbers during the autumn.

G. DOOLITTLE, in the *Apiculturalist*, says: After many careful experiments I find that the bee is in the egg form about three days, in the larva form about twelve days, in the chrysalis form about twelve days, making a period of twenty-one days from the egg to the perfect bee. After hatching, it is sixteen days before the bee goes into the field as a honey gatherer, making in all a period of thirty-seven days from the egg to the field laborer. If this be true, and I believe it is, it will be seen that we would reap the best results, we must have our hives full of brood, even to overflowing, at least that length of time before the harvest, and that all manipulating at this time of year must be done in such a manner that the proper amount of bees, of the right age, be secured to each colony or swarm made by division or otherwise.

NEW ADVERTISEMENTS.

HOOD'S SARSAPARILLA.

Were all wise enough to heed this advice in season, a world of suffering would be avoided. The best months in which to take Hood's Sarsaparilla, the great blood purifier, are

March April May

At no other season is the body so much in need of, or so susceptible to the benefit to be derived from Hood's Sarsaparilla, as now. The impoverished condition of the blood, the weakening effects of the long, cold winter, the lost appetite, and that tired feeling, all make a good spring medicine absolutely necessary. Try Hood's Sarsaparilla and you will be convinced that it is the ideal spring medicine.

Hood's Sarsaparilla

Sold by all druggists, \$1; six for \$5. Prepared only by C. L. HOOD & CO., Apothecaries, Lowell, Mass.

10

MICHIGAN FARMER

AND—
STATE JOURNAL OF AGRICULTURE.

GIBBONS BROTHERS
—SUCCESSORS TO—
WENSTONE & GIBBONS, Publishers.

No. 40 and 42 West Larned St.,
DETROIT, MICH.

Eastern Office: 21 Park Row, New York,
P. B. BROMFIELD, Mgr.

*Subscribers remitting money to this office
should send a favor by having their letters re-
turned, or by procuring a money order, other-
wise we cannot be responsible for the money.

CHANGE OF ADDRESS.
Subscribers wishing the address of the FARMER
changed must give us the name of the Post-
office to which the paper is now being sent, as
well as the one they wish to have it sent to. In
writing for a change of address all that is neces-
sary to say is: Change the address on Michigan
Farmer from Postoffice to — Postoffice.
Sign your name in full.

DETROIT, SATURDAY, MARCH 17, 1888.

This Paper is Entered at the Detroit Post-
office as second class matter.

STOCK SALES IN MICHIGAN.

Schedule of Dates Claimed and Place
Where Held.

Below we give the dates at which sales of
thoroughbred stock will be held in this
State, so far as we have been notified.
Stockmen who intend holding sales this
spring should send in dates at once.

MARCH 27—George Judson, Schoolcraft,
Kalamazoo Co., Shorthorns.
MARCH 28—W. S. Walker, Utes, Devon cattle,
MICHIGAN 30—N. J. Ellis, Springfield, Mich.,
horses.
APRIL 4—N. A. Clapp, Wilcox, Shorthorn
cattle.
APRIL 11—J. G. W. Jenks & Co., Sand Beach,
Mich., Shorthorn cattle.
APRIL 18—J. G. W. Jenks & Co., Sand Beach,
Mich., Shorthorn cattle.
APRIL 25—J. G. W. Jenks & Co., Sand Beach,
Mich., Shorthorn cattle.
JUNE 5—D. Henning, Wheatfield, Calhoun
Co., Shorthorn and Hereford cattle.
JUNE 12—W. R. Boyden and Wm. Ball, Delhi
Mills, Shorthorn cattle.

WHEAT.

The receipts of wheat in this market the
past week amounted to 41,721 bu., against
40,843 bu. the previous week, and 70,084
bu. for corresponding week in 1887. Ship-
ments for the week were 22,180 bu., the
previous week and 171,300 bu. the
corresponding week in 1887. The stocks
of wheat now held in this city amount to
1,436,832 bu., against 1,429,914 bu. last week
and 2,005,707 bu. at the corresponding date
in 1887. The visible supply of this grain on
March 17 was 36,357,747 bu., against 36,662,
887 bu. the previous week, and 58,174,435
bu. for the corresponding week in 1887. This
shows a decrease from the amount reported
the previous week of 404,640 bushels. As
compared with a year ago the visible sup-
ply shows a decrease of 16,916,678 bu.

Wheat has had a bad week of it, and the
tendency of the market has been steadily
downwards. Yesterday the market opened
weak, declined as if demoralized, closing
1½¢, a part of which was finally regained,
but finally closing weak at the lowest points
reported for months. The sales were large,
showing active buying for some purpose,
but the "bears" had it all their own way.
Other domestic markets were in a similar
state. Chicago reported a decline of 1½¢
on wheat, and New York about ½¢, closing
weak.

The following table exhibits the daily closing
prices of spot wheat in this market from
March 1st to March 23rd, inclusive:

| | No. 1 | No. 2 | No. 3 |
|---------|--------|--------|--------|
| March 1 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 2 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 3 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 4 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 5 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 6 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 7 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 8 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 9 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 10 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 11 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 12 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 13 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 14 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 15 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 16 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 17 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 18 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 19 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 20 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 21 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 22 | 86 1/2 | 85 1/2 | 84 1/2 |
| " 23 | 86 1/2 | 85 1/2 | 84 1/2 |

For No. 3 red the closing prices on the
various dates each day of the past week were
as follows:

| | May | June | July |
|-----------|--------|--------|--------|
| Saturday | 84 1/2 | 85 1/2 | 86 1/2 |
| Sunday | 84 1/2 | 85 1/2 | 86 1/2 |
| Monday | 84 1/2 | 85 1/2 | 86 1/2 |
| Tuesday | 84 1/2 | 85 1/2 | 86 1/2 |
| Wednesday | 84 1/2 | 85 1/2 | 86 1/2 |
| Thursday | 84 1/2 | 85 1/2 | 86 1/2 |
| Friday | 84 1/2 | 85 1/2 | 86 1/2 |

No. 1 white, for May delivery, sold at
85 1/2¢ per bu.

It was a singular fact that yesterday, while
domestic markets were weak and declining,
Liverpool was firm, with a good demand for
spot wheat and fair for futures.

Indian wheat is so dirty that dealers are
trying to introduce some system which will
make the natives pay more attention to free-
ing it from dirt, foul seeds, etc., before put-
ting it into market. British millers have
tried to discriminate in its favor as against
American until the reputation of their flour
has suffered. This is what has caused the
increased demand for American flour.

The London Miller says that Hungarians
are complaining that Great Britain is pur-
chasing but little flour; but, says the Miller,
it seems doubtful if the Hungarian flour, for
which 94s is demanded, is really better than
the fine American patent flour, obtainable
at 30s. level. Whilst this uncertainty pre-
vails, it is not surprising that purchases of
Hungarian should be small.

Late reports from the winter wheat States
of Michigan, Indiana, Illinois and Ohio bring
out the fact that the late-sown wheat is in a
weakly condition. The condition of the
wheat in Kansas is said to be better than in
any other State in the winter belt. That
State ought to have one good crop after
such a series of poor ones, and perhaps this
is her year. But she is a poor State to be

on, with her liability to drouths, grasshoppers
and cyclones.

The following table shows the quantity
of wheat "in sight" at the dates named, in
the United States, Canada, and on passage
to Great Britain and the Continent of Eu-
rope:

| | Bushels |
|------------------------------------|------------|
| Visible supply | 37,515,931 |
| On passage for United Kingdom | 14,000,000 |
| On passage for Continent of Europe | 1,500,000 |
| Total bushels Feb. 25, 1888 | 53,015,931 |
| Total previous week | 52,738,453 |
| Total two weeks ago | 52,780,708 |
| Total Feb. 26, 1888 | 76,673,463 |

The estimated receipts of foreign and
home-grown wheat in the English markets
during the week ending March 10 were
650,200 bu. less than the estimated
consumption; and for the eight weeks end-
ing Feb. 25 the receipts are estimated to
have been 2,033,744 bu. less than the con-
sumption. The receipts show an increase
of 1,359,473 bu., as compared with the cor-
responding eight weeks in 1887.

The Liverpool market on Friday was
quoted firm with fair demand. Quotations
for American wheat are as follows: No. 2
winter, 6s. 7d. @ 6s. 8d. per cental; No. 2
spring, 6s. 7d. @ 6s. 8d.; California No. 1
6s. 6d. @ 6s. 7d.

CORN AND OATS.

CORN.

The receipts of corn in this market the
past week were 15,422 bu., against 18,432 bu.
the previous week, and 166,785 bu. for the
corresponding week in 1887. Shipments for
the week were 3,871 bu., against 11,503 bu.
the previous week, and 116,477 bu. for the
corresponding week in 1887. The visible
supply of corn in the country on March 17
amounted to 9,298,426 bu., against 9,202,103
bu. the previous week, and 16,563,002 bu.
at the same date in 1887. The visible supply
shows an increase during the week indicated
of 96,323 bu. The stocks now held in this
city amount to 26,815 bu., against 31,174 bu.
last week, and 55,342 bu. at the corre-
sponding date in 1887. As compared with
a year ago the visible supply shows a de-
crease of 7,064,636. Corn is again lower,
and in spite of light receipts, and the
knowledge that the crop last season was
the lightest in six years, with the farmers
in many States obliged to purchase to carry
their stock along, there is no strength in the
market at present. Quotations here yester-
day were 50¢ for No. 2 mixed, and the
same price was bid for April delivery, with
the market showing more firmness. Chicago,
however, again declined, the loss for the
day being ¼¢. Quotations in that
market yesterday closed at the following
rates: No. 2 spot, 49¢; May delivery,
49½¢; June, 49¢; July, 49½¢. By sample
No. 3 yellow sold at 46½¢, 48½¢ @ 48½¢ for
No. 2 mixed, and 44½¢ @ 45¢ for No. 3. That
market has been fluctuating rapidly all
week, and operators are at a loss to deter-
mine which is the strongest side. Yesterday
the "bulls" seemed to control business.

The Liverpool market on Friday was
firmer with fair demand. The follow-
ing are the latest cable quotations from
Liverpool: Spot mixed, 4s. 7½d. per cental;
March delivery at 4s. 7d., and April and
May at 4s. 6½d. per cental.

OATS.

The receipts at this point for the week were
7,049 bu., against 15,521 bu. the previous
week, and 50,138 bu. for the corresponding
week last year. The shipments for the week
were 7,606 bu., against 7,783 bu. the pre-
vious week, and 22,335 bu. for same week in
1887. The visible supply of this grain on
March 17 was 4,296,845 bu., against 4,426,990
bu. the previous week, and 4,098,711 at the
corresponding date in 1887. The visible
supply shows a decrease of 130,145
bu. for the week indicated. Stocks held
in store here amount to 12,617 bu., against
19,582 bu. the previous week, and 37,752
bu. at the corresponding date in 1887. Oats
are in light supply, and the scarcity keeps
prices up in the face of general weakness in
all other grains. No. 2 white are quoted
here at 35½¢ per bu., and No. 2 mixed
at 35¢. No light mixed offered. Sales of
oats are confined entirely to cash transac-
tions in this market, speculators leaving
them entirely alone. Very few are sent
abroad, and the steadiness of the market
shows that a good thing it would be
if all other grains were consumed en-
tirely at home. At Chicago oats show
less strength than here, and prices
on all grades, both of spot and futures,
are lower than a week ago. Quotations
in that market yesterday were as
follows: No. 2 spot, 28½¢ @ 29¢;
per bu., May delivery at 30½¢, June
at 29½¢, and August at 26½¢. By sample
sales were made at 30½¢ @ 31½¢ for No. 2
mixed, 28½¢ @ 29½¢ for No. 2 white, and 29
@ 30¢ for No. 3 mixed. At New York oats
are firm and active, with prices lower,
showing a decline from the quoted
last week. Quotations there are as
follows: No. 2 white, 30½¢ @ 31¢; No. 3
white, 28½¢ @ 29¢; No. 2 mixed, 27½¢ @
28½¢. In futures No. 2 mixed for March
sold at 37½¢ @ 38¢, and May at 36½¢ @ 37¢.
Western sold at 40¢ @ 41¢ for white, and 37¢
@ 40¢ for mixed.

WHITE SCOTTISH OATS.

The Improvement Seed Co., of Rochester,
N. Y., are sending circulars throughout this
State and probably others, lauding these
oats, and presenting a scheme to make farm-
ers rich by growing them. The company
offer premiums for the largest yields, and
in their circular, which seems to have been
prepared specially for this State, say:
"This oat was named by us. We control
the sale of them and propose to sell as long
as we can. Here is where the farmer is get-
ting the benefit. Our stock of them is limited.
We have not had them grow as yet
outside of this State, and we do not
in Michigan. We cannot sell but a few
hundred bushels in Michigan this year.
There is only one way we shall sell them; that
is so we can control the price of them next
year. We have tried them all winter and
they are a good crop for our crop, and to make
money is what we are all after. Our in-
centives are more liberal than any one
has ever offered you for any new seed.
We have tried them and know they do not
fail. White Scottish oats will make you more
money this year to the acre than any five
acres you can use for any other crop. This
is a large country, and we have just started
it. You will have no trouble in dis-
posing of all you have to spare at the price
we name. We expect to keep this price on
them for several years to come. There is
money in this for you. Remember you will
not have to try them, and you will get
from one hundred to one thousand and fifty
dollars profit for only a small outlay for the
seed. You may say we are talking loud,
but it is only facts. Try it and see if we
care how much you make. We do not
want them known in Michigan this
year, and believe the Early White Scottish
oat to be the farmers' gold mine."

The circular also contains a long list of
testimonials as to the value of these oats,
not one of which has either a name signed
or address given. They bear such a resem-
blance to each other that the ordinary reader
will be apt to set them down as the work
of one person. But here is where the rich-
ness of the scheme shows itself. When
you buy these oats you sign a little contract
(more form you know) which reads:

Gents: Please ship me by —
bushels of your Early White Scottish
oats. I agree not to sell any of the oats
raised from the seed you furnish me for
less than \$1.50 per bushel, prior to July 1st,
1889.

There's where the Bohemian comes in.
You could not sell those for less than \$1.00
per bushel. A good many, however, went
at thirty cents to pay for signing a
contract, and it is safe to say that your
whole crop will be on hand July 1st, 1889,
if you hold them for \$1.50 per bushel. It
seems singular such a scheme should be
started so soon after the bottom had fallen
out of Bohemian oats. Naturally those who
had any thing to do with them will be very
sly of the White Scottish oats. The safe
way is to buy your seeds right out, and let
some one else sign contracts.

In answer to some inquiries published in
the FARMER, A. Morse, of Meosota, an-
nounces that he has some spring rye which
he will sell for seed. Price, \$1 per bushel,
free on cars. Those interested can address
him.

DAIRY PRODUCTS.

BUTTER.

Receipts of dairy butter of good qual-
ity were very light the past week,
and the market has ruled strong
on an advance on anything that
would do for table use. For the choicest
lots as high as 25¢ were readily paid, while
the average was from 22 to 24¢, according
to quality; fair to good sold at 20¢ @ 21¢,
and under this head a good stock of poor
stuff. Creamery is held steady at 20¢
@ 21¢, the latter for extra. The high price of
good butter has caused many hotels and
restaurants to purchase "substitutes," and
the "bull butter" men are enjoying a good
trade. The stuff is sold under its proper
name in the package, but the name never
follows it to the table or appears on the bill
of fare. All the same over one-half of all
the butter consumed in this city in hotels
and restaurants is of the "bogus."

At Chicago the market has
been active and prices firm under light
receipts and a good demand. Quotations
there are as follows: Fancy Elgin creamery, 29
@ 30¢ per lb.; fine Iowa, Wisconsin and Ill-
inois do, 25¢ @ 26¢; fair to good do, 23¢ @ 24¢;
low grades, 14¢ @ 15¢; fancy dairies, 23¢ @ 25¢;
fair to good do, 18¢ @ 20¢; common and packing
do, 12¢ @ 13¢; roll butter, 19¢ @ 20¢.

The New York market has not only kept
up the advance noted a week ago but choice
butter has gone still higher. Fancy Elgin
and Pennsylvania is active at 32¢, and other
grades of choice western at 30¢ @ 31¢. New
State dairy is quick at 29¢ @ 30¢, and in fact
all grades of good or even fair butter are
firm and active at current values. Quota-
tions in that market on Friday were as fol-
lows:

| | Eastern Stock |
|---------------------------------|---------------|
| Creamery, Penn. fancy | 27 1/2 @ 28 |
| Creamery, prime | 27 1/2 @ 28 |
| Creamery, good | 24 1/2 @ 25 |
| Western dairy, tubs, fancy | 21 1/2 @ 22 |
| State dairy, tubs, fancy | 20 1/2 @ 21 |
| State dairy, tubs, good | 19 1/2 @ 20 |
| State dairy, tubs, fair | 18 1/2 @ 19 |
| State dairy, tubs, prime | 20 1/2 @ 21 |
| State dairy, tubs, fair to good | 19 1/2 @ 20 |

Western Creamery, fancy 30 1/2 @ 31 || Creamery, Elgin, fancy | 30 1/2 @ 31 |
| Western industrial creamery, choice | 25 1/2 @ 26 |
| Western dairy, good | 23 1/2 @ 24 |
| Western dairy, ordinary | 18 1/2 @ 19 |
| Western dairy, fine | 22 1/2 @ 23 |
| Western dairy, good | 21 1/2 @ 22 |
| Western dairy, ordinary | 16 1/2 @ 17 |
| Western factory, fancy | 24 1/2 @ 25 |
| Western factory, current make | 23 1/2 @ 24 |
| prime | 20 1/2 @ 21 |
| Western factory, ordinary | 15 1/2 @ 16 |
| Rolls, good to prime | 20 1/2 @ 21 |
| Rolls, fair | 16 1/2 @ 17 |

The exports of butter from Atlantic ports
for the week ending March 16 were 139,
591 lbs., against 106,608 the previous week,
and 220,580 for the corresponding week in
1887.

CHEESE.

At the west the markets hold up well un-
der a good consumptive demand and for
shipment south, and the week closes with
prices steady at about the same range as a
week ago. In this market quotations are 12¢
@ 13¢ for full cream Michigan, 13¢ for choice
do., 10½¢ @ 11¢ for Ohio, and 15½¢ @ 16¢ for
New York; good to choice skims 9¢ @ 10¢. The
Chicago market is steady and fairly active.
Values rule about the same as a week ago,
and the outlook is favorable for a steady
market. Quotations there are as follows:

Choice full cream ched-
dars, 11¢ @ 11½¢ per lb.; flats (2 in a
box), 11½¢ @ 11½¢; Young American, 13½¢ @
14¢; low grades, 5¢ @ 7¢; skims, choice, 6¢
@ 7¢; fancy 1½¢ @ 1½¢; 9½¢ @ 10½¢; hard skim-
med, 2¢ @ 2½¢; brick cheese, 14¢ @ 15¢. The New
York market shows a slight shading of
values, and this seems to have encouraged
buyers to take hold more readily. The
week closes with a steady market and an
improved demand for all fine goods.

Quotations in that market yesterday were
as follows:

| | State factory, fancy, white <th>12 1/2 @ 13</th> | 12 1/2 @ 13 |
|----------------------------------|--|-------------|
| State factory, fancy, colored | 11 1/2 @ 12 | |
| State factory, choice | 11 1/2 @ 12 | |
| State factory, good to prime | 11 1/2 @ 12 | |
| State factory, part skims, fair | 10 1/2 @ 11 | |
| State factory, light skims, fine | 9 1/2 @ 10 | |
| State factory, part skims, good | 8 1/2 @ 9 | |
| State factory, part skims, fair | 8 1/2 @ 9 | |
| State factory, skims, ordinary | 6 1/2 @ 7 | |
| State factory, dark skims | 5 1/2 @ 6 | |
| Ohio state, skims | 11 1/2 @ 12 | |
| Ohio state, ordinary | 10 1/2 @ 11 | |
| Pennsylvania, skims | 10 1/2 @ 11 | |

The receipts of cheese in New York for
the week ending March 16 were 11,101
boxes, against 9,996 the previous week,
and 10,900 boxes the corresponding week
in 1887. The exports from all Atlantic
ports for the same week were 846,702 lbs.,
against 850,352 lbs. the previous week,
and 1,102,354 lbs. the corresponding week
in 1887.

The Liverpool market on Friday was dull,
with American colored quoted at 56¢ per
cwt., and white at 59¢.

ANNUAL MEETING.

Saline, March 16th, 1888.

The annual meeting of the Saline Sheep
Breeders' and Wool Growers' Association
was held in the village of Saline March 6th,
nearly the entire membership being present,
and showing their usual interest. The fol-
lowing officers were elected: J. S. Wood,
President; E. P. Harper, Vice President;
G. C. Townsend, Secretary and Treasurer;
A. Wood, R. Mills and L. Bassett, Direc-
tors.

The President then delivered his annual
address, which will appear in a future issue,
after which some time was profitably spent
in the discussion of different subjects per-
taining to the sheep and wool interests.

Arrangements were made to hold a pub-
lic shearing in this village April 10th.

By a vote of the Society a cordial invita-
tion is extended to all those interested, to
join with us in our shearing.

G. C. TOWNSEND, Secretary.

MR. DARGAN, from the Committee on
Banking and Currency, reported a bill
authorizing the issue of fractional silver
certificates. It provides that the Secretary
of the Treasury be authorized and directed
to issue silver certificates of the denomina-
tions of twenty-five, fifteen, and ten cents,
in such form and design as he may deter-
mine, such certificates to be received, re-
deemed, paid, and re-issued in the same
manner as silver certificates of larger de-
nominations, and to be exchangeable for
silver certificates of other denominations.

The Secretary is also authorized and di-
rected to make such regulations as may seem
to him proper for distributing and redeem-
ing the denominations of silver certificates
herein authorized. We see no good reason
why such a measure should not be passed by
Congress. Most certainly it would be a
great convenience in sending money through
the mails, for which purpose postage stamps
are now largely used. Just why the frac-
tional currency in use during the sixties was
retired is something of a conundrum. Cer-
tainly the great mass of people found it a
great convenience in their business, and
would be pleased to see it again in use.

Cheap Rates.

For the 60th anniversary of Old Fellowship
celebration at Bay City, on April 26th, the
Detroit, Grand Haven & Milwaukee Ry. will
make an excursion rate to Bay City and re-
turn of \$4.35. Tickets will be on sale at
company's city ticket office, or at Brush Street
depot, on April 25th, and valid to return
up to and including April 27th.

Cheap excursions to all prominent points
West, Northwest, South and Southwest. The
Detroit, Grand Haven & Milwaukee and Cal-
cago & Grand Trunk Railways will on March
26th, April 3rd and 10th, and May 8th and 22nd,
June 5th and 19th, sell all round trip excu-
sion tickets at single fare. For further partic-
ulars call at company's office, corner Wood-
ward and Jefferson Avenues, or at company's
depot, for of Brush Street.

AMERICAN VETERINARY COLLEGE.

The commencement exercises of the Amer-
ican Veterinary College took place in New
York the first of March, at Chichester Hall.
The President of the Board of Trustees de-
livered the diplomas to the successful candi-
dates as their names were called by the
Dean of the Faculty, Prof. A. Lantard.
Rev. Dr. Deane, of the Church of Strangers,
delivered a most interesting address. The
prizes were delivered by Prof. Doremus as
follows: The trustees' prize to M. W.
Fritschler, D. V. S.; the faculty, or practical
prize, to H. B. Ambler, D. V. S.; the
alumni prize to J. F. Pease, D. V. S.; and
the anatomical prize to T. M. Buckley, D.
V. S. Thirty-two graduates received their
degree of Doctor of Veterinary Surgery (D.
V. S.).

New Flocks for Record.

Mr. E. N. Ball, Secretary of the Michigan
Merino Sheep-Breeders' Association, reports
the acceptance of the following flocks for
record:

F. J. Gillett, Manchester, Mich.
H. W. Darling, Andover, Mich.
Charles Woodruff, Shafterburg, Mich.
G. C. Townsend, Saline, Mich.
E. N. Bissell, Shoreham, Vermont.
R. B. Parks, Battle Creek, Mich.
Charles Behan, Palo, Mich.

Stock Notes.

MR. J. C. SHARP, of Jackson, has sold to
Messrs. Parks and Smith, of Leoni, Jack-
son Co., the yearling Shorthorn bull 11th
Duke of Hillsdale got by Sharon Duke of
Bath 6444, out of Lady Mell of Sharon
(Vol. 26, p. 546), by Duke of Crow Farm
35323; 3d dam Katie Belle by Treble Mazur-
ka 25045, and tracing to imported Henrietta
by Red Prince (2489). Mr. Sharp writes:
"This does not all my yearling bulls. Have
some fine bull calves, two or three of which
might do for service in June or July."

MR. B. D. KELLY, of Ypsilanti, writes as
follows: "Don't think because I have
made no report I and my Shropshires are
dead. We are not; we are thoroughly alive,
and my flock is doing well. Twenty-five
breeding ewes just commenced to drop
their lambs and they are fine ones, and my
lambs are good healthy little fellows. Their
sire is a registered sheep from Garlock's
flock near Howell. I am sorry I did not
have more, for the demand has been many
times greater than my supply. What sur-
prises me is to see and hear the inquiries
from some of our most noted fine wool sheep
men, in reference to the Shropshires. Mut-
ton and wool combined is a grand combina-
tion." Mr. Kelly reports the following
sales from his flock:

Mr. Lomas, Dexter, ten ewes.
Mr. W. B. Goss, Saline, two ram lambs.
Mr. Palmer, Lyndon, two ram lambs.
Mr. Allen, Milan, one yearling ram.
Mrs. Hewens, Ypsilanti, one ram lamb.
Mr. Thorngbuckle, Belleville, one ram
lamb.
Mr. Mead, Milan, two ram lambs.
Mr. F. B. Crittenden, Pittsfield, one ram
lamb.
Mr. C. Thompson, York, one ram lamb.
Mr. O. Gooding, York, a four-year-old
ram.
Mr. Fiedick, Saline, one ram lamb.
Mr. F. H. Braun, Ann Arbor, 10 ewes.
Mr. M. Alford, Whitaker, one ram lamb.
Mr. G. Lomas, Dexter, three ram lambs.
Mr. Lewis, East Milan, a three-year-old
ram.

Other sales were made, but the names
and addresses of purchasers were forgotten,
and so could not be reported.

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BATTLE CREEK, MICH.

I. S. Phillips, Prop'r. W. B. Phillips, M'gr.

1 bred Black Cochins, Langshans, White and Standard Plymouth Rocks, White and Laced Wyandottes, Black and White Minorcas, Light and Dark Brahmas, Partridge Cochins, Rose and Single Comb White and Brown Leghorns.

Leghorn eggs, 15¢ per setting. All others, 8¢ per setting, 1 discount on large orders.

Stock for sale at all times. Electroplytes furnished at very low rates. m10-4

Our New Non-Freezing Poultry Water won first prize at the great National Show Jan. 1st to 3rd Price \$1.00. Circulars free. [Pat. applied for.] S. A. BACON Grand Rapids, Ohio. c51-361

Poetry.

BAD PRAYERS.

I do not like to hear him pray
On bended knee about an hour,
For grace to spend right the day,
Who knows his neighbor has no floor.

I'd rather see him go to mill
And buy the luckless brother bread,
And see his child run eat their fill
And laugh beneath their humble shed.

I do not like to hear him pray
"Let blessings on the widow be,"
Who never seeks her home, to say,
"If want 'er take you, come to me."

I hate the prayers loud and long
That's offered for the orphan's weal,
By him who sees him crushed by wrong,
And only with his lips do feel.

I do not like to hear him pray
With jeweled ear and silken dress,
Whose washerwoman toils all day,
And then is asked to work for less.

Such pious shavers I despise:
With folded hands and face demure,
They lift to heaven their "angel eyes,"
And steal the earnings of the poor.

I do not like such soulless prayers:
If wrong, I hope to be forgiven,
No angel wings them upward bears;
They're lost a million miles from heaven.

CHRISTENING.

To-day I saw a little calm-eyed child—
Where soft lights rippled and the shadows
tended.

Within the church's shelter arched and aisled—
Peacefully wondering, to the altar carried;

White-robed and sweet, in semblance of a flower,
While as the daisies that adorned the chancel;
Borne like a gift—the young wife's natural
flower—

Offered to God as her most precious hansom.

Then ceased the music, and the little one
Was silent; and the multitude assembled
Heard, and when the Father and of Son
He spoke, the pastor's deep voice broke and trembled.

But she, the child, knew not the solemn words,
And suddenly yielded to a troubled wailing
As helpless as the cry of frightened birds,
Who've untied wings for flight are unavailing.

How like in this, I thought, to older folk!
The blessing falls: we call it tribulation,
And fancy that we wear a sorrow's yoke
Upon at the moment of our consecration.

Miscellaneous.

HOW ALLIE KEPT LENT.

It was a cold, dark, cheerless day, and the city streets, which a few weeks before, were thronged with a happy crowd of Christmas buyers, were almost deserted. A fine, steady snow was falling, and the wind was rising in a very unpleasant way, blowing the sharp particles of snow in every one's eyes and ears, not at all abated by the umbrellas that were held to ward them off. It was a poor snowflake that allows itself to be discouraged by an umbrella when there is any wind at all; for, if it fails to get under or around that particular umbrella, it can drift to one side, or even fall to the ground, and rise again in a minute, fresh and vigorous for another attack.

"Why, is that you, Katie? I nearly ran you down."

"My! Doesn't it blow? I'm almost pulled to pieces," is the reply, as two young girls meet at the entrance of a florist.

"Oh! Katie, what lovely roses!" the last speaker continued. "Are you going to wear them to-night?"

"Yes. Aren't they fine? They'll go so well with my pink plush. I hear that Mamie Tracy gives a party next week. I suppose we'll be invited."

"Of course," said she who answered to the name of Katie. "And I'm awfully glad. But then to think Lent's got to come in, and spoil all our fun!"

"Yes," said Katie, lightly. "I don't see why we have to keep Lent, when we'd so much rather be having a good time."

"Well, we'll have a good time to-night anyway. I'm going to buy some yellow flowers of some sort, if I can find them. Come in with me."

"No. I must hurry home. I've lots to do before to-night."

"Good-by, then," and Katie tripped into the store while Mattie paused before the window to see if among the roses there displayed were any more beautiful than the ones she had purchased. She did not notice a little thin wisp of a girl standing close against the glass, with her eyes upon the bank of lovely flowers in the window; but it was evident that her thoughts were upon her fair neighbor, whose warm, fur-trimmed costume brushed against the faded calico skirt and the small checked shawl, in which she had rolled her arms in the vain hope of warming them. She looked puzzled and distressed, and seemed to be trying to muster sufficient courage to address the pleasant-faced girl by her side. Mattie turned to go, and this brought matters to a crisis. One little blue hand came out of the checked shawl, and was laid lightly on Mattie's arm.

"May I speak to you? I want to know—I want to ask you?"

Mattie turned, and looked into the beseeching eyes that were as blue as her own, but that had seen more privation and trouble in her own life and in that of those around her than Mattie's had in all their sixteen years. Mattie's heart throbbed with pity as, with one glance, she took in the poverty of the child before her. She was used to poor persons; her mother and herself both taught in a mission sewing-school, and Mattie had accompanied her mother upon many visits to their little pupils.

"What is it?" asked Mattie, kindly.

"What do you want?"

"I heard you talking, and I want to—know if there are two—two of them."

"Two of what?"

"Two of them; two Lent's. What is Lent?"

"Lent!" exclaimed Mattie, in astonishment. "Why, Lent is—why, Lent is a fast of the church. There is only one."

"Oh!" said the child in disappointed tones, and rolling her arms in her shawl, turned as if to go.

"Don't go!" said Mattie. "Where do you live? What is your name, and why do

you ask me about Lent?"

"I live in the alley back of Chester Street, in Ferris' row," was the reply, in a hesitating voice. "My name's Allie Martin."

She paused, and seemed reluctant to answer the last part of Mattie's question. Mattie repeated it kindly.

"I heard the other girl say Lent spoils all your good times. Mr. Mason talks of Lent; but he never said it spoils anything. Are you sure there is only one?"

"Why, I don't know what you mean!" said Mattie, surprised at the tears that stood in the little girl's eyes. "Who's Mr. Mason?"

"Mr. Mason, he's a minister. He comes to see mother."

Mattie felt the blood rush to her cheeks as she recalled the words the child had overheard; and she felt condemned and embarrassed before the girl whose faith in some one or something she had evidently and painfully shaken. To cover her confusion she asked Allie's name a second time, and scribbled it on one of her bundles.

"Would you like my mother to come and see you, Allie?" she asked. "She can tell you all about Lent."

"Yes ma'am, thank you," and the child was hidden from view by a gay matinee crowd that poured forth from an adjoining theater.

"What is Lent?" rang in Mattie's ears all the way home. She was mortified that she had not been able to give the child a better answer. As she thought about it, she was surprised to find how little attention she had ever given to the meaning of those forty days that ended with Easter Sunday. She knew what that commemoated, of course; but of that interval when her friends refrained from worldly gayeties, and society was "so awfully dull," as she had often expressed it, she had a very vague knowledge. "I'll read it up in my Bible to-night," she said to herself as she entered her mother's house. She did not, however; for she got home from the party too late, and by that time she had forgotten Allie's existence. Perhaps it is just as well; for I fear she would have spent much valuable time in the search, and have been no wiser in the end than when she began.

Allie Martin hurried as fast as her benumbed little feet could carry her; but Chester Street was a long distance from the window where she had met Mattie, and before she reached the narrow alley and ascended the flight of rickety outside stairs that led to Mrs. Martin's poor rooms, the tears that had fallen down her cheeks had become little balls of ice in the old hood under her chin. Mrs. Martin rose hastily from the one small window, where she had been straining her eyes to finish some sewing by the fading daylight, and put two sticks of wood in the broken stove, that was quite marvelous to look at when there was a good-sized fire burning in it. It was so covered with large queer-shaped cracks that it looked like an illuminated map of some strange country. Mrs. Martin moved the tea-kettle forward upon the principal continent on the map, and turned, with a smile, to welcome her little daughter.

"Cold, my little girl?" she said, as she untied the ragged hood. She must have found the frozen tears, for a shade of apprehension crossed her pale face, and she asked, hurriedly: "Did you find Mrs. Greene at home?"

"Yes, mother. Here is the money; and she said she would have a good deal of work this spring; and as you did this so nicely, you should have it all, if you had time."

"Thank God!" said Mrs. Martin, gratefully, kissing Allie's cheek. "But why these tears? With this money I shall be able to buy you a warm dress and a cloak of some kind. I saw one yesterday that was only three dollars."

"Oh! mother," sobbed Allie, putting her arms around her mother's waist, and pressing her face against her bosom. "I never want to see Mr. Mason. He's a cruel, wicked man."

"Why, why, Allie?" exclaimed Mrs. Martin, very much surprised. "What do you mean?"

"I found to-day why we have such hard times," said Allie. "It's all because of Lent. I wish he had never told us about it."

Mrs. Martin thought, for a moment, her little daughter must be out of her head; but, taking her on her lap, she placed the little cold feet on the hearth of the rickety stove, and, by skillful questions, soon had the whole history of the afternoon.

"They had such beautiful dresses, and she had a muff and flowers. Oh! mother! pink roses! like we used to have over the porch at home! Don't you remember, mother?"

"Yes, dear," Mrs. Martin remembered very well, indeed.

"And they were going to a party to-night, and it's all got to be spoiled. Oh! why does Lent have to come to people, mother?"

"At first Mrs. Martin could not account for Allie's familiarity with the word 'Lent'; but she soon recalled the last visit from Mr. Mason, a zealous churchman, and the emphasis he laid upon her observance of the fast. He had dwelt much upon the blessedness to be derived from it, and now she remembered that Allie had been present, and as it appeared, had been an attentive listener.

By the time Allie was thoroughly warmed through, Mrs. Martin had hushed her grief by the promise to tell her something about Lent that would make her feel much happier, after they had their tea.

"So my little girl thinks we are keeping Lent by living in these cold rooms, and wearing such old clothes?" said Mrs. Martin, as, later in the evening, she took Allie on her lap, after she was ready for bed. She was well wrapped up in an old shawl of her mother's that kept off all the little chilly airs that lived in the corners of the room, and sat all day on the window sill, and, in fact, hovered pretty well all around the room, except directly over the little cracked stove, and she was happy in the prospect of a quiet rock and talk with her mother.

Mrs. Martin, told, in a simple way, how Lent had prevailed for many years in the Roman and Episcopal churches, and how society's fashionable observance of the fast differed from the self-denying spirit that leads so many good persons to give up some pet indulgence and abstain from all gayety for that one period of the year. If Allie did not comprehend all her mother said,

she understood enough to know that the pinching poverty of the last few years of their lives had not been brought about by Mr. Mason or his teachings, and the kind-hearted man was restored to his place in her affections.

Mrs. Martin held Allie in her arms a long while after the little girl fell asleep, and her thoughts went back, as they did many times each day of her life, to the home where Allie was born. She saw the little porch, with its festoons of climbing roses, from which the wind scattered a shower of pink snow upon the little lawn with its carpet of white clover, the play-ground of little Allie, and the child herself reaching to pluck the red, white and pink hollyhocks down by the gate, just as she looked that morning. Allie's father had been away some months on a long journey, and was then expected home, and Allie could hardly be kept away from the gate, where she was "waiting for papa," long enough to eat her meals. She seemed to see the gate open and the kind neighbor come up the walk, and, after a few words of preparation, give her the paper where the name of John Martin appeared on the list of those killed by a terrible railway accident. Then followed the dark weeks when the pretty home and all that it contained was sold for debt, and Allie's mother found herself with only a few hundred dollars in the world, and no one to turn to for help, except an aunt of her husband, who lived in a distant western city. To her great joy, this aunt wrote her to bring Allie and come to her, and she would put her in a way to support herself. It was a long journey, and when the travelers reached the home that had been opened to them, it was to find the kind old aunt on her death bed, speechless and unconscious. Of the years that followed, Mrs. Martin did not think much that night; they were very much alike, and very, very hard; but she had her little daughter to work for, and as she laid her on the hard bed, she prayed that she might always be kept as pure and good as she was then. It was very cold that night in the two little rooms that Allie and her mother called "home." The old cracked stove was dark and cold, and the little, chilly airs had everything between their own way, and finding themselves masters of the situation, immediately let in any number of other little airs that were much colder than they; and they danced and played all about the room at such a rate that they woke up Mrs. Martin.

"How cold it is," she thought. "I hope Allie does not feel it as I do."

No, indeed. Allie was very warm; too warm, poor Mrs. Martin soon found. She was tossing and moaning, with a fire in her veins that set all the cold airs in the whole city at defiance. Early in the morning Mrs. Martin sent for a physician, who pronounced the disease the dreaded fever that had raged with such fatality among the poor in "Ferris' Row." Then followed long weeks of sickness, care and anxiety; and it was not until the snow was gone and the grass was beginning to take on a faint green hue under the cold spring rains that Allie was able to sit for part of the day in the old rocking chair. The few dollars that Allie had brought to her mother the night before she was taken sick, had been spent long ago. Neighbors in the Row had brought her what they could spare of their scanty living, and the kind doctor had sent a load of wood. Mr. Mason had been a frequent visitor, and three times had left her five dollars, "sent her by a friend," he said; but Allie needed medicine and nourishment, and one day Mrs. Martin found she had but a few cents left in her purse, and there was only wood enough to last one more day. A quick glance around the little pantry showed nothing but a cup of milk for Allie's supper and a little, a very little, salt pork, no bread, and no flour. I think it was allowable for Mrs. Martin to feel a little sad. As she helped Allie up into the old rocking-chair and tucked her carefully in the old shawl, Allie felt her mother's tears on her face.

"Mother," she said, putting her arms around her mother's neck. "I know why you cry. It's because there's no money in that old purse. Now, I'm better to-day, and can say aloud, and you can go to Mrs. Greene's, and get some of that sewing. Can't you, mother dear?"

"That's a bright thought, Allie," said Mrs. Martin, smiling. "I'll go this afternoon, if you will promise not to walk around too much. Perhaps she will advance me a little money, she is so kind, and I can bring you an orange for your supper."

Allie smiled, and, after a pause, said, slowly: "Don't you remember, mother, how I told you long ago about the girl with the pink roses who talked about Lent? It does seem to me as if we had been keeping Lent her way. All our good times have been spoiled. But I was just thinking that to-morrow's Easter Sunday, and that's the end of Lent; and now I'm better, and you'll come home to-night with some money, and perhaps to-morrow morning we'll begin to have better times, and good things to eat again, and be happy, as we used to be. I kind of feel so, mother."

At the close of this long speech Mrs. Martin kissed her "little comforter," as she called the child, and hurried to Mrs. Greene's, only to find that sickness and death had visited the elegant home, and Mrs. Greene, with her remaining children, had left town. Mrs. Martin was disheartened by this blow. She was but little known in the great city, and there were so many as poor as she seeking work that her chances seemed very small. As she walked home through the wet streets her heart was very heavy, and every breath was a prayer. "Oh, God! show me what to do! O, God! Give me food for my child!" she repeated over and over again, as she climbed the stairs to her rooms. She was surprised to see a bright light shining from under the door. "Can Allie have lighted the candle?" she thought. "I hope she hasn't been trying to walk much. She is not strong enough." She opened the door, and stood gazing with astonishment on the scene before her.

The candle was burning brightly on the window sill, and the cracks in the stove were doing their best to let light the stove room. Between them both it was fully light enough for Mrs. Martin to see her little daughter standing by the table, looking up at a tall man, who stood with his back to Mrs. Martin. Allie's face was aglow with happiness, and a merry laugh fell

from her lips just as Mrs. Martin opened the door. The tall man's arms were full of bundles, and by his side was a basket that was as full as could be of more queer shaped packages.

"Here's mother!" cried Allie. "Oh! mother, you came too soon! We were going to have supper ready for you."

Mrs. Martin did not speak; but she closed the door, and took two steps forward right into the arms of the tall man, who turned to meet her, while all the bundles fell to the floor.

"John! John!"

"Yes, Hattie, my wife." And then there was a little crying party of three all packed into the big rocking-chair, and they did not seem to be in any great hurry for their tea, after all. How much there was to tell! It was another "John Martin" that was killed on the train; but Allie's father had been very ill at the time; and when he was able to travel, he reached his home only to find his wife and child gone. He traced them to the city where his aunt had lived; but there all clow ended, and the past three years had been spent in fruitless search. That night he had been directed to Ferris' Row by Mr. Mason, and had soon convinced Allie that he was her "own papa." She had told him her history, and ended with the information that there was only just enough pork for their supper, and he must go out and buy a loaf of bread before mother got back. He was gone some time, and had just returned when Mrs. Martin reached home.

"Now, mother, didn't I tell you I believed our Lent was over? And to think to-morrow is Easter!" cried Allie, suddenly, from somewhere in the big rocking-chair.

"I'm sure you can imagine the rest; how, after while, Mrs. Martin was able to stop laughing and crying, and made such a fire in the old stove as it had not seen for months; how Allie undid the packages, and screamed with delight at the treasures that were brought to view, and how a little later, the table was spread with a supper, the like of which Allie and her mother had not tasted in years; and then the happy evening that was spent by those three in that dingy little room, and the plans that were made for the future, and that we will trust were all carried out. I do not know that they were; but I do know that, the next summer, when the pink rose was budding over a certain little porch in a pretty western town, a little girl stood on a chair in front of it, diligently counting the buds, to find, if she could, just how many pink roses there would be in a few weeks; and, although she is dressed in pretty clothes and has rosy cheeks, she looks so much like Allie Martin, of Ferris' Row, that I really believe it is she.—The Independent.

Common Myths.

Ignorant folk, wonder-mongers, and even scientific observers, have disseminated many erroneous and exaggerated notions which are not readily eradicated. We are still told, for instance, of the Norwegian mead, a frightful whirling chasm in the sea capable of sucking down the largest ships; though, in reality, this fearful "whirlpool" is simply a run of the tide through a rapid channel, is rarely dangerous, and when chiefly on account of the rocks on which it may draw vessels. Sir John Herschel gave his endorsement to the statement that stars may be seen in the day-time from the bottom of a well, but this has been proven to be an error by tests from a shaft nearly half a mile deep. Mr. John Murdoch has recently shown that the E-kimbo does not, as text-books on physiology affirm, doze through their long winter night, keeping up their bodily heat by enormous meals of raw blubber and lamp-oil, but that their winter life is active, their food mostly cooked, and their consumption of oil not excessive. A still widely-accepted belief is that the hair-nake is a wonderful transformation of a horse's hair when kept in water, though the old creature (known to science as *Gordius aquaticus*) really grows from eggs, and in early stages inhabit the bodies of insects. A very old idea, without foundation in fact, is that crocodiles shed mournful tears; while stories of toads imprisoned in solid rock are numerous and supported by much evidence, but have probably resulted from imperfect observation. Accounts of the germination of grain from the mummy-pits of Egypt have arisen from the deception practiced by the Arabs in placing fresh seeds with the belongings of the mummies. Though not known to be incorrect, the inference that the moon influences the weather is a very natural one to untrained observers, and is far less absurd than a thousand vagaries that gain credence, such as the dropping of live reptiles from the clouds, the ejection of live snakes and other creatures from the human stomach, the localization of water by a forked stick, the extinguishment of fire by sunshine.

Doctors' Fees.

Gilsey, the humorous correspondent of the *Utica Observer*, relates the following anecdotes of the delicate way in which certain famous physicians in New York intimate to their unhappy patients the size of the fee that is expected:

Dr. D. B. St. John Rossa is one of the handsomest and most intellectual of the physicians practicing in New York city. He almost invariably wears a look of great gravity and solemnity. His style of receiving the visitor is fully as impressive as that of Dr. Hammond, and he looks much like a wizard as he sits in his chair, but his magic appears to be rather that of a modern mind-reader than that of an Oriental priest. The visitor waits in an ante-room on the parlor floor where he can amuse himself with books and periodicals, as do some twenty or thirty others. It is seldom that he will be fortunate enough to see the Doctor in less than an hour after his arrival. When it comes his turn a polite attendant, who reflects in a lesser degree the wizard-like qualities of his master, approaches and requests the patient to give his name and the nature of his errand. Upon being informed, the servant walks silently to a tube in the rear of the room through which he speaks to his master in his study above. The hollow tones reverberating through the speaking-tube prepare the patient for the mysterious ceremonies that are to follow. Being told that the Doctor is ready to see him, the patient is conducted up stairs to the Doctor's study. There he finds him seated at his sk looking grave and polite. Quiet-

ly, solemnly, he motions the patient to a seat. Here the patient sits at one corner of the desk which stands between him and the medicine man. A bank note rivets attention. It is a United States gold certificate, and the figures 5 and 0 seem to dance around in a bewildering fantastic dream as you stare at them. Fifty dollars for a consultation fee!

Dr. Alfred B. Loomis, another expert physician, is considered one of the gruffest in the profession. Many of his patients ascribe this to his stern attention to duty, and like him none the less; but to a timid patient a visit to him is full of terror. He wastes no words in idle compliments or sympathetic questions, but comes at once to the point, and as soon as the medical part of the interview is finished, shows unmistakably his desire that the patient shall get out. The atmosphere of his study bristles with business. But he, too, has a way to indicate the size of the fee, which he demands. As the last words are said, he stops pacing the room, and seats himself at his desk. With a quick, abrupt motion of his right hand, he pulls out the little drawer of his desk. It is filled to the brim with bank-notes, and, resting over all, is a beautiful, glossy, brand-new ten-dollar note. I do not mean to imply by this that the Doctor does not receive larger fees, but that is always what he considers the necessary amount where his scrutiny of the patient inclines him to believe that he is not over blessed with an abundance of this world's goods.

A Novel Way to Get Rich.

Gilsey, who views life through metropolitan spectacles and tells what he sees to the *Utica Observer*, says:

Several excessively rich men in New York are getting richer by going tremendously into debt. Next to Grace Church, on Broadway, a handsome building of pressed yellow brick is nearly done. It is owned by Orlando B. Potter. Its cost, with the ground, will be something like a million and a half. I was watching the workmen as they were hoisting a tile into place, when a prominent real estate man approached me. "Do you know that that building is mortgaged for about half its value?" he asked me.

I replied that I had not any information upon the subject.

"Well, it is," he said, "and what is more striking is that the most of Potter's property is in the same condition. He owns a large amount of real estate in this city. In fact, if all the property that stands in his name was entirely free and unencumbered his wealth would be colossal. Nevertheless, his head is very level, and you may be sure he would not be putting up new buildings and then putting mortgages on them unless it paid to do it."

"Do you mean that the mortgages pay him?" I enquired, astonished.

"That is just exactly what I mean," replied the real estate man, smiling. "I thought that my assertion would surprise you, but, to tell the truth, there is nothing remarkable about it at all. Business men in this city do it right along. Their plan is very simple and requires only one thing. That is good credit. Take the Potter Building at Park Row and Beeken Street as an example. The ground there cost \$1,000,000, and the structure cost as much more. Potter found the opportunity to put up an office building in one of the best locations down town. He could have gone ahead without any difficulty and have paid the entire cost, but he saw a scheme worth two like that. He borrowed what money he could on first mortgages. In that instance it was \$500,000. He borrowed it at a small interest because he was financially solid himself, and because the security, being a fire-proof building, was the very best. Now all he has to do is to pay that small interest. His income from the buildings is very large, something like ten per cent. net, and so he is not only making a handsome return on the money he has personally invested but also on the money he has loaned. In fact the less of his own money he has invested in the building the more money he will make, for he can keep on starting buildings with his own capital and use other people's money to keep them running. By having his own money free he can at the same time be secure at least if anything unforeseen should occur. Mr. Potter is engaged in this business probably to a greater extent than any other man, for he has buildings throughout the busy parts of New York, but there are many others who imitate him. It requires shrewdness and a keen insight into the value of a location. The same thing applies of course, to private residences, and many builders who are now prominent have made their money on the plan that Potter is now pursuing. Judge Pitshke, of the City Court, for instance, owns half a dozen blocks of private houses on this same plan, and is rapidly rolling up wealth. It is only in a city like New York that such schemes are evolved."

His remarks have the corroboration of several other experts in real estate matters.

Italian Railways.

The United States surpasses the world in railroad traveling. A trip there can be made with comfort. In Europe it becomes a penance. A vast field of operations is open to the professional corporation wreckers of America if they would only transfer their genius to this quarter of the globe. The traveling public on this side of the Atlantic, at least, would be glad of their appearance, because in their manipulations some comforts, at least, would be instituted. As bad as it is in England, steam journeying in this quarter of the globe falls below even that standard.

In the winter season a fellow, if not careful, will have his toes led in his boots or contract pneumonia. There are no stoves in the carriages, as they are termed, and the only means of heat is supplied at the principal stations by sheet iron flasks, shaped like big army canteens, filled with hot water, that are shoved into each compartment. Before thirty minutes elapse their surfaces are chilled; for let it be remembered, all the sentimentalities concerning the balmy air of Italy in winter, are nonsense, pure and simple. Snow covers the ground, and the cold is biting, especially so if you sit in it as you have to do when making any excursion.

Along the route an opportunity to protest is never offered, because there is not a conductor with the train except on rare occasions.

and, then that fanctionary cannot reach you while the wheels are whirling along, since the carriages have no continuous platform communication, the doors being fastened to gondolas, with only this exception: that there are six seats in each compartment, three on each side. The engineer is the monarch of the train, only between station and station, however, which distance he covers as best he can. As soon as he steams up to a depot a government officer blows a brass horn, whereupon he is compelled to choke off the motive power at once, for the government runs the railroads. An ugly fist it makes of it. The profits are enormous, nevertheless, inasmuch as the expenses of employees are comparatively small.

At the station carriage doors are jerked open and tickets inspected that will not be collected before the traveler alights at his destination. To be able to take a meal at a station, no matter the length of time a train is scheduled to remain, is a novelty. When it is time for the dispatcher to toot his horn or ring a bell—a milkman—the engineer has to send the engine on its way immediately. A station master must have one section cleared off before he can order another on its way. To propose to him to have many trains to run as is customary in the larger depots of the United States would be simply to threaten him with spasms.

There are three sorts of conveyances, first, second and third class—all of a poor class. To ride in a superior carriage means to sit on a lumbering cushion, with a tidy at your back and your luggage in a rack over your head. If you are alone you can stretch to an adjoining seat; your legs as a consequence being somewhat higher than your head, because of a padded arm rest between every pair of seats. Intermediate transportation consists of similar accommodations, in carriages padded in an inferior manner, while the third class means roughing it on bare boards. Your vis-a-vis may not be agreeable, but you have to succumb to the exigencies of the trip. Your fellow travelers often amuse themselves by commenting on your make-up, as you know by their whispered conversation and stealthy sniffling glances. Because, as an American, used to better treatment, you fall to bring a horse blanket with you, in which to wrap your knees and feet, you are looked upon as an Equilian.

A pair of rubber shoes are a source of curiosity, not infrequently of laughter. Other men and women travel in low cut shoes, and with blue pinched noses. It is all summed under the head of custom. The American traveler is amused in his turn by a fellow running along the roofs of the carriages, a red hot poker in his hand, lighting any way he could the wicks of gasoline lamps that illuminate the padded coils. Nor is the enjoyment diminished at the discovery that the boasted lightning express trains stop at every station, big and little. The duties of the conductor of the sleeping cars, a berth in which has to be secured oftentimes three days in advance, if even then a chance comes to get in one, are to make the beds of the passengers and blacken your shoes. The English system goes beyond this. In a corner of the car is a heated stove, with a kettle of water on the top. The conductor makes a cup of tea when requested. The Italian official carries your sachel. You sleep, that is if you can, crosswise in a car not any higher than a circus cage, and in the morning congratulate yourself that the car springs did not punch into your ribs.—*Baltimore Sun*.

A Detroit Minister's Opinion of Americans.

On Sunday last, at the Simpson M. E. church, the Rev. M. C. Hawks preached a sermon on the "Trials and Temptations of Business Men." Among other things he said:

"America is a vast gambling hell from the shores of Maine to the quays of San Francisco. This feverish haste to be rich, is begueting a host of people who are measuring eternity with a yard-stick."

"A man with such thoughts may attend church, but even then he is a living, walking advertisement of his business. If he dared to do it he would leave the tag on his coat which he wears to church with the cut-down price on it. In church he is in a half-sleeping state, dreaming about his business. While the preacher talks of the wedding garment he wonders if it is all wool, and if he could not discount the price. The 'bread of life' suggests to his mind a provision store. While the preacher talks of the New Jerusalem he meditates on speculations in corner lots and heavenly hills, and wonders if the pine is all out cut. When the streams of life are spoken of, he wishes glad the life of God, he dreams of saw-mills and dock-rooms. He could look right into the face of an old-fashioned orthodox hell and plan to use it for a brick-kiln."

A Suspicious Livery Stable Man.

There is a livery stable keeper in Houston, Texas, who is very careful to whom he hires his turnouts. One Sunday afternoon a young married man called at the livery stable and wanted a horse and buggy. "Who is going along with you?" asked the livery stable man. "I am going to take my wife's mother out for her health, and you can put a hatchet and spade in the bottom of the buggy, as I want to bring in some young cedar trees to plant out at the cemetery."

"My buggies are all engaged, and if they were not you would have to pay \$200 buggy hire for one afternoon." "Why, how's that?" "Besides, I don't want to be hauled up as a witness every time the court meets." "Witness! What about?"

"And then you'll be taking a change of venue because public sentiment is down on you here, and I don't want to be attached by the sheriff as a witness, travel forty miles, and be fined \$10, and then be black-guarded by three or four lawyers." "Why, what are you talking about?" "That's all right. I don't say you ain't justified, but I ain't no fool. When a man wants to take his mother-in-law out in the country for her health, with a hatchet and a spade, and talks about planting things in the cemetery, I know all I want to. My buggies are hired for a year in advance. Just take your customer to some rural house. When I hire a buggy it is a buggy, and when I hire a car it is a car. I don't want to do any business what's not legitimate."

Texas Siftings.

"Nasal Voices, Catarrh and False Teeth."

A prominent English woman says that American women all have high, shrill voices and false teeth.

Americans don't like the constant thing they get about this nasal twang, yet it is a fact caused by our dry climate, atmosphere, and the universal presence of catarrhal difficulties.

But why should so many of our have false teeth?

That is more of a poser to the English is quite impossible to account for on the theory of deranged stomach caused by imprudence in eating and of regular exercise.

Both conditions are unnatural.

Catarrhal troubles everywhere prevail in cough and consumption, and promoted by mal-nutrition induced by ranged stomach-action. The condition, modern one, one unknown to our ancestors, who prevented the catarrh, cold, consumption by abundant and regular use of what is now known as Warner's Catarrh and Consumption Remedy. Log Cabin Sarsaparilla, two old standard remedies handed down from ancestors, and now exclusively put under the strongest guarantees of efficacy by the world-famed man, Warner's safe cure. These two remedies plentifully used as the spring and seasons advance give a positive assurance of freedom, both from catarrh and deranged and if neglected, inevitable diseases, pneumonia, lung troubles and consumption, which so generally prevail among our people.

Comrade Eli Fisher, of Salem, Mass., Iowa, served four years in the late war, contracted a disease called consumption. After using Warner's Log Cabin Sarsaparilla and Consumption Remedy, he says, dated Jan. 19th, 1885: "I do not feel the lungs any more, my cough has disappeared, and I do not have any more sneezing spells." Warner's Log Cabin Sarsaparilla and Consumption Remedy. Of course we do not like to have our men called nose talkers and false teeth owners, but these conditions can be overcome in the manner indicated.

The Diet of English Farm Laborers.

An English book, published some time since, gives bills of fare showing the diet of English laborers in certain parts of England:

DENBYSHIRE (single laborer, when ed.)—Breakfast: Milk (hot in winter, summer) followed by cold mutton. Dinner: Butcher's meat five in the week; broth when there is but one; and pudding when the meat is cold vegetables and bread. Supper: Mutton, new milk, bread and cheese, and cabbage.

DEVONSHIRE (laborer with family)—Breakfast: "Bread-broth," i.e., milk, salt and pepper boiled in water. Baked rice, salt or sugar, and cabbage. Dinner: Bread and butter, tea, bread and treacle.

DORSET—Breakfast: Bread and cheese; wife and a child, dry bread. Dinner: Husband, bread and cheese; and children, dry bread. Supper: Bread and butter.

WILTSHIRE—Breakfast: Bread and water or broth. Dinner: Bread, cheese, butter, bread and butter, onions.

HANTS—Husband has all the bread taken twice a day. Supper: Half cabbage and four puddings.

CAMBRIDGE—Husband, bread, butter, field on a mess composed of bread, butter, with pepper and salt. D. Husband, meat, pudding and onions; and children, dumplings of flour and butter. Supper: Tea, bread and butter.

WILTSHIRE—Coffee, bread and vegetables. Dinner: Husband, broth and vegetables and children, tea and bread. Supper: Tea, bread and butter.

What "kicking" there would be America on such a regimen! Here the laborer sits at table with his master, expects the choicest cuts of everything, if things are not to his liking he does not hesitate to mention the fact.

The Orchid Craze.

The trade in orchids has reached a most proportion in England. Larger houses have paid for orchid roots than ever paid for any specimens of live plants. The most expensive flowers are now the finest. The price of plants ranges from order of their scarcity. Some specimens that readily brought 100 guineas ten years ago can now be bought for a few shillings. A single root of a newly discovered variety will command a fabulous sum. Every son who is trying to get a large collection will endeavor to obtain it.

Every portion of the tropics is now searched by orchid hunters sent out by London importers, who have grown the business of obtaining rare species. One dealer has sixteen collectors in various parts of tropical South America, Africa, Asia, and the islands in the Pacific and Indian Oceans. Their salaries and expenses amount to over \$100,000 per year. They travel and explorations they employ natives. One of our consultants in Y. A. reports that the orchid trade is making the country prosperous. A post will often obtain more for an orchid procured from a swamp or the branches of a tree than he received for hard labor a dozen years.

Collecting orchids is attended by dangers and great losses of property. Several collectors in the jungles of India have been devoured by tigers, bitten by venomous snakes or drowned in bogs. Quite a number have been overturned while on the beach and eaten by the cannibals of the island. Many valuable specimens are on account of lack of facilities for transportation. One London dealer received a telegram from Port of Spain informing him that 10,000 orchid roots had been killed by exposure to the sun on Red Sea or by being knocked about in a storm. A collector on one of the pine islands got together 20,000 specimens which he spread out on the beach to but an unusually high tidal wave swept them all into the sea. Another collector, Peru had his roots in sacks on a party soldiers, who declared they had imported the orchids having any value.

Chicago Tribune.

